

THE

Desert

MAGAZINE



JULY, 1940

25 CENTS

LETTERS

Grants, New Mexico

Dear Mr. Henderson:

Opened my copy of the June issue of the Desert Magazine—and lo, the mountain had come to Mohammed. I refer to the picture of the "old Carrizo stage station" on page 15.

Last time I layed my bedroll on the sands at the old stage station the nearest mountain

was "Coyote," many miles southeast of the historic oasis.

Now if you will correct the caption under that picture to read "Water trough at the old stage station at Mountain springs," I'd rest a bit easier—being sure that the 15 years I've spent in snow and sunshine, on the west rim of the Colorado desert weren't lived in vain.

TIM OLLA.

Dear Tim: Now that you're called it to my attention I know you are right. That picture in the June number couldn't be Carrizo stage station, because the old Carrizo stage house was of adobe—and the one in the picture is of rock. My apologies to you and James Jasper. Mr. Jasper gave me the photograph correctly captioned—and the error was made in this office.

—R. H.

Overton, Nevada

Dear Randall:

Just received the Desert Magazine today and found it very interesting. In glancing over your Desert Place Names I note an error, and I trust this correction will be accepted in the good spirit in which it is given.

Bunkerville was settled January 6, 1877. Edward Bunker Sr. led in the colonization of this town, and incidentally, he was a member of the Mormon battalion, a group which made one of the most historic marches on record.

Outside of the little town of Genoa, Overton and St. Joseph (now called Logandale) are the two oldest farming settlements in the state of Nevada, being first settled January 8, 1865. The man who led this early colonization was Thos. S. Smith. St. Thomas, now buried forever by storage waters behind Boulder dam, was named after him.

GEORGE PERKINS.

• • •

Glendale, California

Dear Sir:

There is a poem, or a portion of one, that has haunted me for years and I am enclosing it so it may have a chance to haunt someone else. It has something of the call of the desert in its lines and sounds like Stevenson, but I am ashamed to admit I do not know the author . . .

*"They've cradled you in custom, they have primed you with their preaching,
They have soaked you in convention,
through and through—
They have put you in a show case; you're
a credit to their teaching,
But can't you bear the wild? It's calling
you!
Let us probe the silent places, let us see
what luck betide us,
Let us journey to a distant land I know.
There's a whisper in the night wind,
there's a star agleam to guide us;
For the wind is calling, calling—let us
go!"*

Encouraged by your attitude toward poets in general and by your letter to Leon Noyes in your current issue, I send you a couple of spasms that were written with the aid of Pisgah Bill, who only helped after considerable urging. Bill says "Poets ain't nothin' but dad-burned sun struck dudes."

W. H. BURTIS.

P. S. I don't think you should encourage me to write poetry. —W. H. B.

• • •

San Bernardino, California

Dear Sir:

In looking over the Desert Magazine for January '40, I see on page 44, an item about a piece of jasper sent you by Olin J. Bell of San Francisco, and that it came up from bedrock of one of the Golden Gate Bridge foundations.

A number of years ago, in 1909 to be exact, when Fighting Bob Evans brought his fleet of battleships to visit San Francisco I was living near Santa Rosa and came down on the excursion train to Lime Point light house, on the Marin county side of the Golden Gate. In exploring around the cliffs there, I found quite a large deposit of jasper of all colors, red and yellow predominating. I recognized it as being the same as several large specimens I had at that time, which I had found at Mark West springs near Santa Rosa.

There must be a vein of this jasper running through these cliffs and under the waters of the Golden Gate. Think more could be found around those cliffs, but doubt if anyone would be allowed to explore there now, as it is a government reservation and visitors are not allowed. Just writing this as an interesting note on the item.

WILFRID M. SNOW.

**Only one night in the year
Only one place in the world**

20th ANNUAL

**SMOKI
CEREMONIALS**

**SUNDAY at Sundown
AUGUST 4th**



The Smoki are dancing again. On Sunday, August 4th, in the cool, pine-scented, mile-high city of Prescott, Arizona, the Smoki People, 300 white men and women who are preserving the rituals and dances of the Indians will hold their 20th Annual Ceremonials.

The only group of its kind in the world, the Smoki, this year, will give the strange intriguing, dramatic chants and dances of two famous Southwestern Indian tribes — the Zuni and Hopi, and the world renowned Smoki Snake Dance.

The beat of the tomtooms, the rattle of gourds, the stomp of moccasined feet will transport you to another world. Don't miss this most colorful of Southwestern events — the Smoki Ceremonials.

**including
the
WORLD FAMOUS
Smoki Snake
Dance**

PREScott, ARIZONA "LAND OF THE
SMOKI PEOPLE"

DESERT Calendar

JUN. 27-29 National Association of Deans and Advisers of Men meets at Hilton Hotel, Albuquerque, New Mexico. James F. Findlay, University of Oklahoma, president and chairman.

JULY 1-3 New Mexico association of dentists in convention at Santa Fe.
1-4 Motor boat and horse races, Provo, Utah.

1-5 Hopi Craftsman exhibit, Museum of northern Arizona, Flagstaff.
2-4 Southwest Indian Powwow, Flagstaff, Arizona.

3-5 Cavern City Cavalcade and rodeo, Carlsbad, New Mexico.

3-6 Rodeo at Reno, Nevada. Edward Questa, chairman.

4 Rodeo at Patagonia, Arizona.

4 Indian rodeo. Salt river Indian reservation, Mesa, Arizona.

4 Rodeo and horse show, Cimarron, New Mexico.

4 Pioneer Days, Albuquerque, N. M.

4-6 Round Valley rodeo, Springerville, Arizona.

4-6 Annual rodeo, Silver City, New Mexico.

4-7 Frontier days celebration and non-professional rodeo, Prescott, Ariz.

5-6 Historical celebration at Inscription Rock, El Morro national monument, New Mexico.

10 Pageant depicting discovery of Grand Canyon, staged 16 miles east of Grand Canyon village. Harold C. Bryant, Grand Canyon national park superintendent.

11-13 Ute Stampede, Nephi, Utah.

11-13 Robbers' Roost Roundup, Price, Utah.

13 State society reunion for former residents of Utah, Arizona, New Mexico and Nevada, in Sycamore Grove Park, Los Angeles, California. C. H. Parsons, 416 S. Spring St., secretary.

13-28 Water colors by Millard Sheets, Claremont, California, at Flagstaff, Arizona museum.

18 Cowboys' Roundup, Clovis, New Mexico. Cowboy ballads and legends.

19-21 Southwest district convention of 20-30 clubs, Carlsbad, New Mexico. Wiley Van Hecke, Santa Fe, district governor.

19-24 Covered Wagon Days, Salt Lake City, Utah. Rodeo. Wm. J. Rackham, chairman.

19-24 Covered Wagon days, Salt Lake Utah. Rodeo.

24 "Creation" to be given by Salt Lake Oratorio society under direction of Squire Coop, Salt Lake City.

25-26 Fiesta at Taos, New Mexico, to celebrate St. James and St. Anne's Days.

Coronado Entrada, pageant celebrating 400th anniversary of Spanish entry, will be presented in the following New Mexico cities this month—Las Vegas, July 12-13, Roswell, July 17-19.



Volume 3

JULY, 1940

Number 9

COVER LETTERS	Pinnacles in Bryce Canyon, Utah Comment from Desert Magazine readers Inside cover
CALENDAR PHOTOGRAPHY DISCOVERY	July events on the desert 1 Prize winning pictures in May 2 El Vado de los Padres By DR. RUSSELL G. FRAZIER 3
TREASURE	Loot of Monterrey By JOHN D. MITCHELL 6
ADVENTURE	She Mines Alone—and Likes it By WALTER FORD 7
PROSPECTING GUIDE	Night Prospector — By HULBERT BURROUGHS . 11 Captain John Hance By FRANK C. LOCKWOOD 15
QUIZ DIARY	A Test of Your Desert Knowledge 18 June at Yacuitapec By MARSHAL SOUTH 19
POETRY WILDLIFE CEREMONIAL PERSONALITY	TWILIGHT REVERIE, and other poems 21 Desert Trader — By GRACE P. NICKERSON . . 22 Smoki Snake Priests 23 Seven-Time Winner in Arizona By OREN ARNOLD 25
ARTIST	He Wanted to do Honest Painting By JOHN W. HILTON 27
FICTION LEGEND	Hard Rock Shorty — By LON GARRISON . . . 28 Coyote and the Bluejays By HARRY C. JAMES 29
BOTANY	Hill Climbers of the Desert By MARY BEAL 30
LANDMARK HOBBY NEWS BOOKS HOBBY PLACE NAMES MINING COMMENT	Echo Arch — By MARGUERITE SCHMIDT . . . 32 Cacti — Edited by LUCILE HARRIS 34 Here and There on the Desert 36 UNCLE SAM'S CAMELS, and other reviews . . 38 Gems and Minerals, Edited by ARTHUR EATON 39 Origin of names in the Southwest 42 Briefs from the desert region 43 Just Between You and Me — By the Editor . . . 44

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Baby Red-Tailed Hawks

(*Buteo borealis calurus*)

By GEORGE McC. BRADT
Villa Nova, Pennsylvania

Awarded first prize in the monthly photographic contest conducted by the Desert Magazine. Taken at Tucson, Arizona with a Bantam Special Kodak on support. Pan X film, f16, 1/10 second.

Special Merit

The following photographs were judged to have unusual merit:

"Desert Ruins," by Patricia Parks, Los Angeles, California.

"Three Palms," by F. H. Ragsdale, Los Angeles, California.

"Desert Road," by Dorothy Clayton, Needles, California.

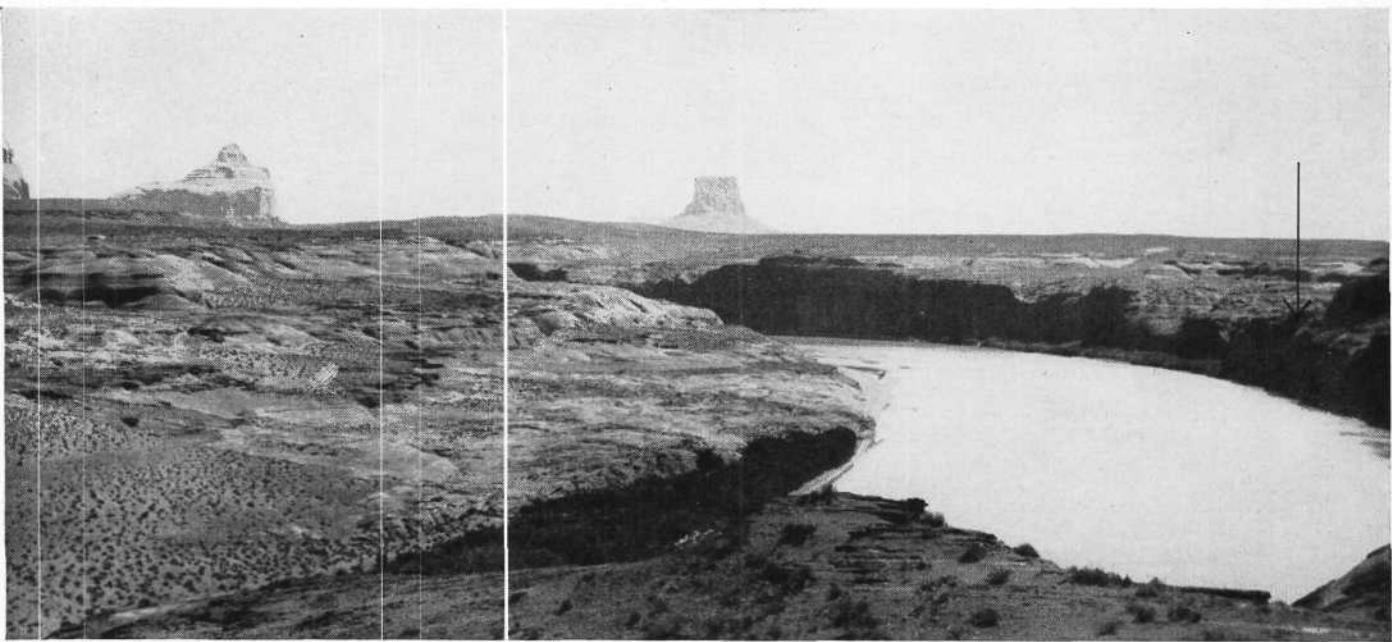
"Lunchtime on the Desert," by Dr. E. R. Voss, Los Angeles, California.

Cloud Pattern

By MARIA HASSELBERG
2210 Raymond Avenue
Los Angeles, California

Winner of second prize in the June photographic contest of the Desert Magazine.





Arrow indicates the mouth of narrow Padre creek tributary where Father Escalante and his party cut steps in the canyon walls to make the first recorded crossing of the Colorado river in northern Arizona November 7, 1776. The padre and his companions crossed diagonally downstream to the willow-grown bar shown in the center of the photograph.

El Vado de los Padres

(THE CROSSING OF THE FATHERS)

After years of controversy it remained for a little party of explorers headed by Dr. Russell G. Frazier to discover and establish beyond any doubt the exact spot at which Father Escalante and his trail-finding expedition made their historic crossing of the Colorado river in 1776. Dr. Frazier wrote this story for the Desert Magazine just before his departure with the Byrd expedition to the Antarctic several months ago.

By DR. RUSSELL G. FRAZIER

"In order that we might get the horses down the side canyon I have mentioned, we found it necessary to cut steps with our hatchet in the rock of the mountain for a distance of about three yards or a little less."

HIS entry was made in his journal November 7, 1776, by Father Silvestre Velez de Escalante, who, with Father Francisco Atanasio Dominguez, led the first known party of white men to enter what is now the state of Utah.

This group, numbering 10 Spaniards and several Indians and halfbreeds, left Santa Fe, New Mexico, to explore a route to Monterey in California.

Entering the state near Jensen, Utah, they traveled west through the Uintah basin, crossed the Wasatch mountains, visited the "Laguna" Indians at Utah lake, traveled south along the mountains to what is now called the Escalante des-

ert, and then were forced by lateness of the season to turn back toward Santa Fe without accomplishing their original mission. Eventually they reached Lee's ferry on the Colorado river but could not cross because of the depth and velocity of the great river. Traveling northeast over the high and broken plateau near the river they finally discovered a place which appeared to be a practicable ford, and after cutting steps in the steep wall of a side canyon to get their horses down, succeeded in making the first recorded crossing of the Colorado river.

The exact location of that first crossing, known as El Vado de los Padres, has been in dispute for a number of years. It seems to have been known and used by early Mormon missionaries on their visits to the Hopi villages and the Navajo country, but through error has been wrongly indicated on all modern maps.

This error was first brought to my attention by Frederick S. Dellenbaugh, a

member of the second Powell expedition of 1871, whose interest in the history of the river continued to the end of his life.

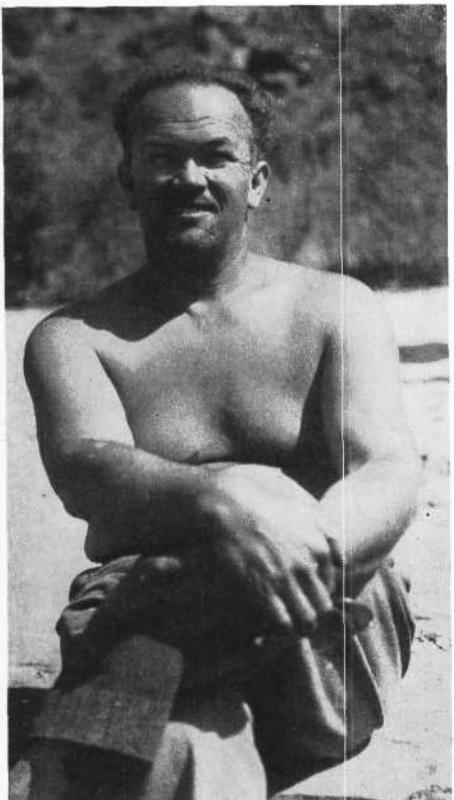
Charles Kelly, who had photographed the supposed crossing in 1932, while on a river voyage, was also of the opinion that it was incorrectly designated and did not correspond with Escalante's description.

After examining the supposed crossing at Cane creek while on my river voyage of 1933, and after much discussion of the problem with Dellenbaugh, Kelly and others, I determined to locate the actual crossing, if possible, and place a suitable marker for the guidance of future travelers. After reading Escalante's entry it seemed possible that if he cut steps in the rock, they might still be visible, and if so, the steps themselves would definitely locate the actual Crossing of the Fathers.

Four years passed before anything further was done in this direction. Then in

1937 I met Byron Davies, a young man who had prospected in the vicinity of Cane creek. He told me he had seen steps cut in the rock in a small canyon a mile below the supposed crossing. This seemed such a good clue that within a few days Davies, Kelly and I were headed upstream from Lee's ferry in a boat equipped with outboard motor, to check these reported steps with Escalante's journal.

With a very low stage of water and an underpowered motor we had great difficulty in negotiating the 40 miles to Cane creek, our destination. We finally arrived at noon of the third day, and



DR. RUSSELL G. FRAZIER
Photograph taken at Lee's Ferry while with the Julius F. Stone expedition in 1938.

immediately set out, in the broiling sun, to locate the little canyon seen by Davies. We found it about a mile south of Cane creek. It checked in every particular with Escalante's description. After some scouting we located a place where it seemed possible to get horses down from the plateau above, and following this dim trail we soon discovered old weathered steps cut in the rock, the same that Davies had seen previously. Our shouts, echoing down the narrow canyon, announced our enthusiastic belief that we had discovered the actual steps cut in 1776 by Escalante's party. We followed the little canyon down to the river and there found and photographed the actual ford used by that first party of white men to make a crossing of the Colorado river. Escala-

lante's description was so accurate that there could be no mistake.

In climbing back out of the canyon, however, we found another series of ancient steps cut in the rock, making two series, one with 12 steps and one with 25. This did not check with the statement that the steps were "about three yards or a little less." After studying the matter for some time we concluded that some of the old trading expeditions from Santa Fe which followed this old Spanish trail after Escalante had pioneered it, might have added to Escalante's original steps to aid in getting their pack trains out of the canyon. This seemed reasonable.

This river trip was made in August. Unfortunately, the shutter of my camera was out of order, and all my pictures were blanks! So in October I organized another party to visit the crossing and get photographs. This time we went in overland, from Cannonville, Utah, with a pack train, principally because I wanted a photograph of a horse coming down that tricky, weather-worn flight of steps. This time I took several cameras and photographed the historic trail in black-and-white and color.

In 1938 I made another river trip with Charles Kelly and others as a member of the Julius F. Stone expedition. On that occasion we erected a copper plaque at the mouth of the little side canyon containing the steps, naming it Padre creek in honor of the two priests. This was my fourth visit to the crossing.

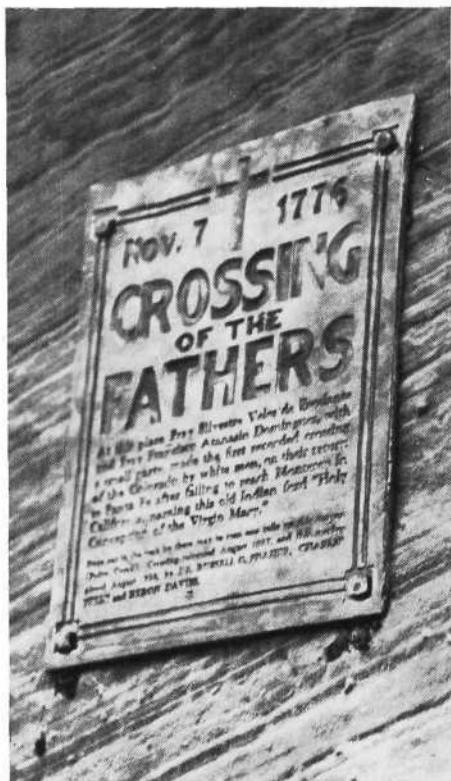
In the spring of 1939 Byron Davies, our guide on the 1937 expedition, again visited the crossing with P. W. Tompkins of San Francisco, well known explorer of southwestern deserts. On that trip Davies brought back a photograph of what appeared to be a badly weathered inscription left by Escalante on the walls of Padre canyon. Knowing that any such inscription would be of the utmost importance to historians, I immediately organized another overland expedition to photograph and translate the inscription if possible. I was again accompanied by Byron Davies, his brother Ammon, and my 11-year-old son John Russell. It was the boy's first real desert expedition, but he stood the experience of dry camps, a hard bed and long days in the saddle like a veteran.

On this trip we planned not only to visit the crossing but to strike the trail below and follow it to the ford, checking every landmark with the journal so carefully kept by that first traveler. We started from the old abandoned Mormon town of Pahrea and struck Escalante's trail where it crossed Wah-weep creek.

We were the first, since 1776, to retrace that section of Utah's oldest recorded trail and check the landmarks with the old journal. Traveling north from Gunsight butte we reached the

steep south bank of Padre creek, then turned west for about a mile in order to head the deep canyon and reach the previously discovered steps leading down from the north wall. It occurred to me that this detour was not mentioned in the journal.

Our little caravan cautiously worked its way down over the old trail, finding the ancient steps a necessity for horse travel. Without them we could not have made the descent safely. Both the animals and ourselves were indeed grateful for the cool, clear little stream in the bottom of the canyon. We made camp there, clearing out a space in the dense growth of cane grass, and cooked supper, intending to search for the ancient inscription next morning. In the cool of the evening we took a stroll down the narrow canyon of Padre creek toward the river. My young son and Ammon Davies were some distance ahead when I heard them shouting. I hurried on, presuming they had found the inscription. Instead, they



This copper plaque marking the actual Crossing of the Fathers was placed here in 1938 by the Julius F. Stone Expedition.

pointed excitedly to a sloping wall on the south side of the canyon in which were cut six ancient steps "three yards long or a little less," leading up out of the canyon on that side. They had at last accidentally discovered the actual steps described by Escalante, which apparently have never been used since 1776. They are on the south side of Padre creek, answering every requirement of the record made at the time.

Although I had passed this spot several times, I had not noticed these steps. They are of course very badly weathered, and not easily seen unless the light is just right; but they still show traces of having been cut by some steel instrument. The inscription we had been searching for proved to be only mineral stains on the cliff face; but our accidental discovery of the original Escalante steps was more than sufficient reward for the hard journey.

The two longer series of steps on the north side of Padre canyon were probably cut by one of the early Spanish trading expeditions from Santa Fe, possibly before 1800. They were already old when first seen by Jacob Hamblin, early Mormon missionary, in 1858, according to Uncle Billy Crosby, a grandson of Hamblin.

To thus identify the actual Crossing of the Fathers, after so many attempts, and to stand in the footsteps of the padres, was the greatest thrill of my life.

• • •

NO MORATORIUM INDICATED IN MINE ASSESSMENTS

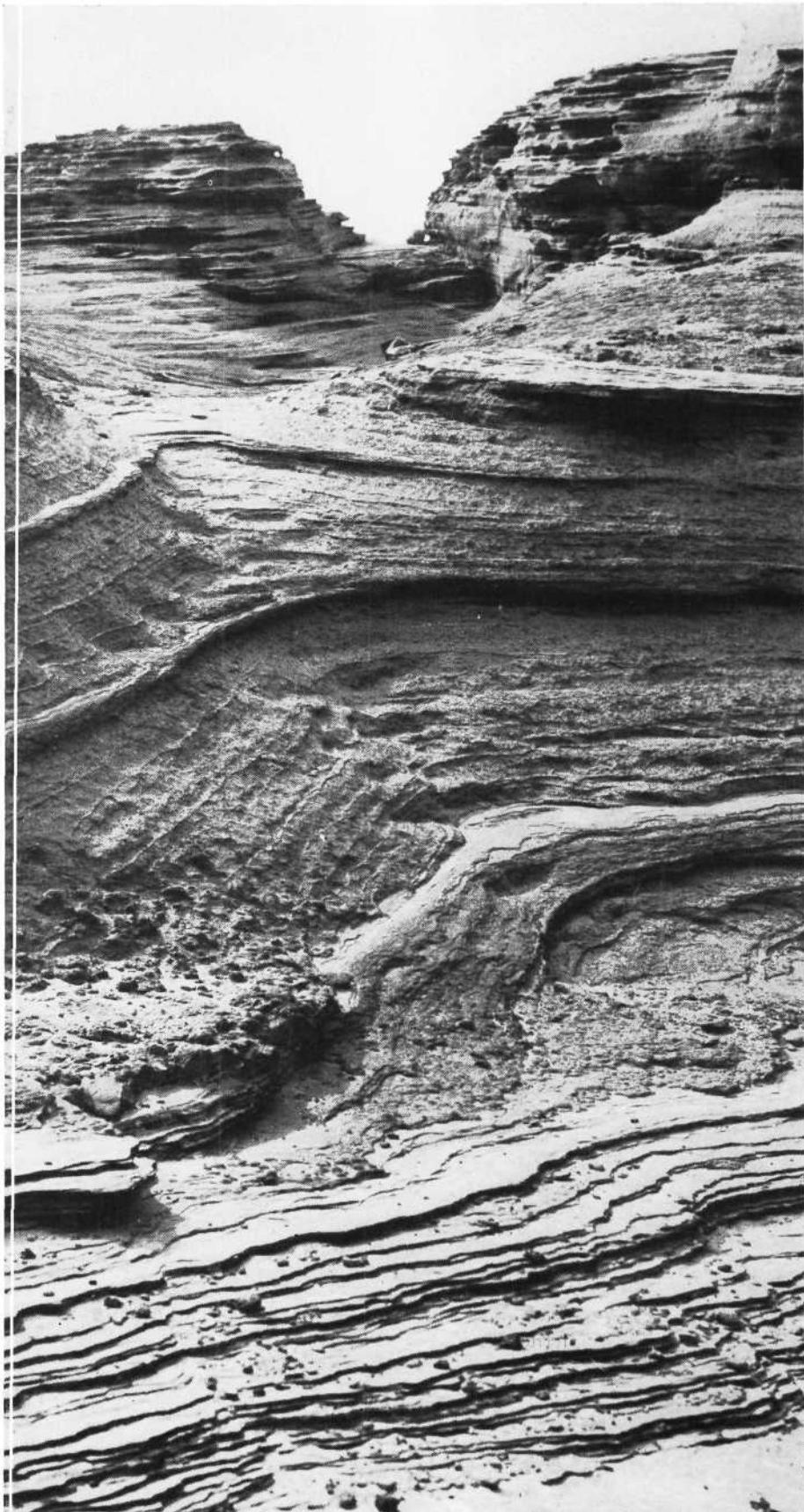
Unless congress reverses the position taken a year ago and during the closing days of June enacts legislation extending the moratorium on mining assessment work, it becomes mandatory that operations be started on unpatented claims prior to 12 o'clock noon, July 1, 1940.

Last year the national legislature refused to grant a 12-month moratorium, but did extend the time to September 1 because thousands of miners had expected the moratorium to be continued and were in danger of losing their claims if some additional time was not granted.

Congress served notice, however, that it would henceforth refuse to waive the assessment work—and there is no evidence that it will recede from this position.

The theory upon which this work is required is that no one should be allowed to hold mining claims for an indefinite period without showing some sign of intention to develop them.

It costs little to stake out a claim on the public domain and secure first title. All that Uncle Sam asks is that one who takes up the claim show his intention to develop the vein or ledge thereon by doing work each year to the extent of \$100. This is designed to prevent dog-in-the-manger policy on the part of those who would appropriate mineralized slices of the public domain and hold it forever, neither developing it themselves nor allowing anyone else to do so.



Badly weathered, but still showing marks of the metal tools used to gouge them out, these steps or footholds in the steep rock wall were cut by Father Escalante and members of his party in 1776 to enable their horses to reach the bottom of the canyon where they could cross the Colorado river.

Somewhere in New Mexico—according to this lost treasure legend—more than a million dollars in gold and silver and jewels lie buried in a shallow mine shaft. Justice caught up with the bandits who put it there before they could recover their ill-gotten wealth. Perhaps it is all myth—but more than one treasure-hunter has combed the hills in search of this fortune.

Loot of Monterrey

By JOHN D. MITCHELL

Illustration by Gene Knight

SOMEWHERE along the old New Mexico trail that runs from Shakespeare to Skeleton canyon is a shallow mining shaft containing riches that would be quite astounding to the original owner of the prospect hole were he to return there.

According to the story current in this region, the original prospector found a small stringer of gold, but it pinched out before he had gone many feet beneath the surface—and the hole was abandoned. No one knows the location of this shaft, but today it is believed to contain 25 mule loads of gold and silver bars and buckskin bags of Spanish coins and jewelry.

The gold and silver bullion was stolen from the mint and smelter, and the jewels from the cathedral at Monterrey, Mexico. It is known as the "Monterrey loot," and for a time was buried in Skeleton canyon near the little town of Rodeo, New Mexico.

The bandit gang that stole the treasure and buried it was composed of Jim Hughes, Zwing Hunt, "Doc" Neal and Red Curley. Hughes was the leader, and he and his men were said to have been mixed up in the Lincoln county war in which Billy the Kid was the central figure.

Forming an alliance with the notorious Estrada gang, Hughes and his partners stole 25 U. S. government mules and



The gold and silver bullion was dumped in an old mine shaft with two buckskin bags of jewelry and church plate on top—then covered with rocks and gravel.

then crossed the border into Mexico. They robbed the mint, smelter and cathedral at Monterrey and returned to United States territory with booty estimated to be worth \$800,000. Shortly after returning to Texas bad feeling developed between the Estrada men and the Hughes gang, and the feud ended in a gunfight in which the Mexicans were wiped out.

The treasure was buried temporarily in Skeleton canyon and Zwing Hunt, who had been wounded in the battle, was left to guard it. Other members of the band continued their raids on mining camps and stages in Arizona and New Mexico. Their last crime was the murder of a farmer and his son and the theft of their wagon and ox teams.

Hunt had recovered from his wound, and it was decided to load the treasure, which now amounted to over a million dollars, in the wagon and head for Silver City.

Two days from Skeleton canyon, a distance estimated between 40 and 50 miles, the unshod oxen became so crippled from travel over the sharp rocks they were unable to continue.

That night the loot was carried up a hill and dumped into the abandoned shaft. Two buckskin bags of jewelry and church plate were thrown in the hole on top of the money and bullion, and the shallow shaft filled with rocks and

gravel from the dump. The oxen were turned loose to shift for themselves. The woodwork of the wagon was burned.

The bandits had taken what money they could carry conveniently, and when they reached Silver City they spent it freely. Heavy drinking led to a gunfight in which a young easterner was killed by one of the bandits, and the entire gang immediately dispersed to the hills with a posse after them. Neal was shot and died instantly. Hunt was wounded and taken to Tombstone where he subsequently escaped and was reported to have been killed by Apache Indians.

Red Curley and Hughes were overtaken and captured at Shakespeare where they were well known for their depredations, and both were hung from a rafter in the dining room of the Pioneer House.

Curley offered to take his captors to the buried loot if the noose were taken from his neck, but the request was refused—and with his death none remained who knew the location of the treasure-filled mine shaft.

Prospectors have searched the area, and doodlebug gold hunters have made many trips into the region of Skeleton canyon and as far away as El Muerto springs—but the old shaft probably has acquired a covering of desert vegetation by now, and the recovery of the fortune is considered unlikely unless some one comes upon the spot by accident.



She fills the bucket with hand-picked ore, then climbs 40 feet to the top of the shaft and hauls it out with a hand windlass.

She Mines Alone

--and Likes it

By WALTER FORD

IN the summer of 1937, Grace Finley, then 29 years old, arrived at Copper City in the Mojave desert of California.

Since few people of the present generation have heard of Copper City, it should be explained that in the late '90s this was a thriving town of 1000 persons, located 37½ miles north of Barstow. A prospector had discovered high-grade copper in the hills there, and a boom camp had been established almost overnight.

But the high-grade pinched out—and since the location was too far away from the smelters to ship low grade ore profitably, Copper City became another ghost town. Today only the walls of two stone buildings mark the site of the old camp.

Grace Finley did not even have a tent for shelter when she arrived at the place

where Copper City had been. Her total assets were a few rations, some prospecting tools—and an idea.

From experience gained in seven years of prospecting up and down California she reasoned that copper ore could still be found in paying quantities in a location which had been overlooked by the previous generation of miners.

Three years have passed since she put up her lonely camp at these old diggings—and she still believes in her idea. But they haven't been easy years.

Miss Finley is reticent about those first months on her claim. But when I saw the trenches she had dug with pick and shovel under the withering midsummer sun before she located the first ore body, I could not help but wonder how many

seasoned desert rats would have carried on as she did.

Grace Finley mines a ton of copper ore every week—and it nets her about \$19.00. She lives alone in a little shack in a remote corner of the Mojave desert—and is happy and confident. If she strikes it rich she'll build a better home—but it will still be on the desert she loves. Here's a story you'll like—about a young woman—well, you'll like her too.



Miss Finley and Walter Ford, the reporter who wrote this story, are pictured at the mouth of one of the shafts.

be welcome to stay as long as she remained there. The relative apparently had other ideas. She took one look at Miss Finley and then told her that the rooms were all taken. Miss Finley laughs as she recalls the experience. "I was tanned from the desert sun and must have looked like an Indian. I could hardly blame her for turning me away."

Without money to pay for lodgings, she went to the city jail, explained who she was and asked permission to spend the night there. The request was refused but with the refusal came an invitation to be the guest of the police force in one of the Salt Lake City's leading hotels. The next day her story appeared in the newspapers and from then on to the end of her stay, she was treated as a visiting dignitary. A car with a motorcycle escort was placed at her disposal and every want was supplied. "For months, previously, I had been living on beans," she recalls.

The officials of the smelter company where she displayed her ore were so impressed that they gave her an ore contract and sent a geologist back with her to inspect her claims. Once back at her mine, the geologist's report strengthened her conclusions. "Keep on digging," he told her, "you've got something here."

With no outcroppings, no float, it seemed uncanny that Miss Finley could locate such a large ore body as she un-

covered when she dug her first holes. I asked her to explain her methods.

"You will probably think that I'm crazy when I tell you this," she smiled, "and perhaps I am. I haven't decided myself, yet. I saw this location in a dream for two nights in succession."

If I were versed in the psychology of dreams, I should undoubtedly give them full credit without question, but being of a more practical turn of mind, I cannot help but feel that womanly intuition and the experience gained in years of desert prospecting, aided in no small way the locating of that first body of ore.

Lost Job in New York

Ten years ago Miss Finley was employed as a telephone operator in New York City. Then came the depression with unemployment in its wake. She travelled west, and being unable to find a job, she decided to make one for herself. She went prospecting, and for the next seven years she ranged up and down the state looking for gold. There is hardly a range that she has not visited. Occasional luck at panning gold grubstaked her to other locations. Twice during her wanderings she barely escaped death.

Once during the heat of summer, she started to walk, somewhat foolhardily, she admits, from Fenner to Cima. She had almost lost consciousness when she was found about half way to her desti-

nation. On another occasion she became lost in a blizzard near the old town of Steadman and was saved from freezing by a prospector's dog.

After her story appeared in the Salt Lake City newspapers, it was re-told in mining journals and various newspapers across the country. The result was a flow of letters which continues to this day. She showed me some of the letters. Words of encouragement were contained in most of them and not a few from the opposite sex offered a wee bit more—their hands in marriage. Apparently the sight-unseen business plays little part in the matrimonial plans of Miss Finley. "Marriage is a serious proposition," she confided to me. "It can either make one's life complete or ruin it altogether."

High Grade in Old Shaft

Mild mannered and soft-spoken, she bears little resemblance to the fictional concept of a desert rat, yet she can place a charge and "muck out" a hole with the best of them. She seems able to judge the location and extent of ore veins with remarkable accuracy. On one occasion I found her working in one of the abandoned shafts of old Copper City. The showings in the hole were not impressive but she had run a drift from the bottom of the shaft and had struck high-grade copper ore. The assay report which she showed me later stated that the rock was 25.47 per cent pure copper, and also had a silver content of six to 16 ounces per ton.

When I visited Miss Finley at the mine she was bringing out ore with a windlass and bucket, a grueling job at best, but added to that was the additional labor of ascending 40 feet of ladder every time the bucket was to be pulled out of the shaft.

While Miss Finley was showing me around the site of old Copper City, we came across a number of old tin cans, laced together with wire. "That was to be the wall of my first house," she explained. "There are plenty of old cans lying around and I thought that I could join enough of them together to make some sort of shelter. But it was too difficult to make holes in the cans so I gave up the idea." Her present home is a modest little cabin a short distance away from her first claim.

The original water supply of old Copper City is a spring in the hills directly behind the old townsite. In recent years the water has been piped to a concrete trough to provide water for the cattle that range in Superior valley. My remark about the large number of quail around the trough brought forth a story that demonstrated the young lady's resourcefulness, and explained why she has been able to make her way under difficult circumstances.

During the early days of her venture at Copper City, she found the daily fare of beans somewhat monotonous. The quail were coming to the trough every day, but she had no firearms. Then she hit upon the idea of attaching an old inner tube to a piece of fish cord and stretching it across one end of the trough. A long piece of heavy string was attached to the center of the tube and she rigged up a blind where she could hold the other end of the string. When the quail perched on the edge of the trough a quick pull on the string sent them floundering in the water—and there was quail in place of beans on the supper table that evening.

Miss Finley stated that her ore shipments so far have averaged about \$19 a ton. That represents a strenuous week's work. Such returns fall far short of her goal but they do provide money for further explorations. Her objective is to locate a deposit rich enough to sell to a large mining interest. With the eternal optimism shared by all her prospecting brethren, that strike is rarely more than one day ahead.

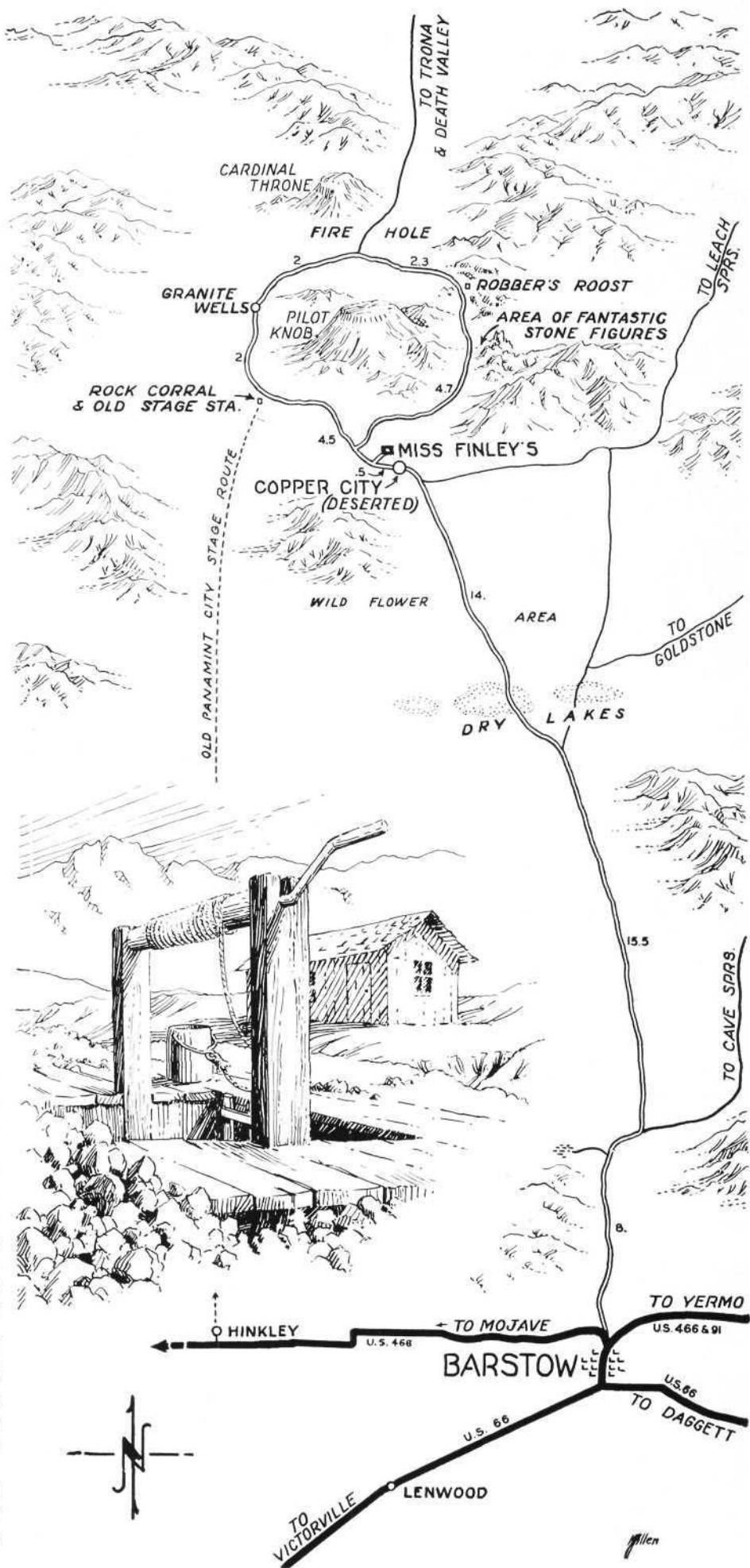
Prefers Home on Desert

Thinking about the time-worn tale of prospectors, who having sold their claims, rushed to the bright lights of the city for a riotous fling at what they called "real living," I asked Miss Finley what she planned to do if her claims bring her wealth. There were no dreams of Hollywood grandeur in her answer. "I would like to build a home on a location not far from here," she said. "The site is near a spring of cool, fresh water. The view is perfect and I can see visitors coming 14 miles away. I have the plans for my home already drawn."

Copper City is an hour's easy drive from Barstow over a graded road. An additional 15 mile drive will take one through a section which, though little known to the motoring public, played an important part in the early mining history of the Death Valley area. The road circles historic Pilot Knob and rejoins the main road a few miles from Copper City.

Pilot Knob is a volcanic cone more than one mile high. Its symmetrical banding of brown and tan makes it easily distinguishable from surrounding peaks long distances away. For years before the advent of maps and passable roads, it was used as a landmark to chart the course of desert travelers who broke their own trails. Sixty-five years ago the Panamint City stage line circled its western slope and continued on to San Bernardino. Five miles from Copper City the ruins of the stage station and rock corral may still be seen.

From the rock corral, the road skirts the base of Pilot Knob for three miles and then unfolds a panorama that is



breath-taking in its diversity and extent. Nearly one hundred miles away, snow-clad Mt. Whitney may be seen glistening on the horizon. In closer perspective appears the flat expanse of Searles lake, with the town of Trona just barely discernible. Immediately below the summit lies Fire Hole, a huge rocky basin with colorings so vivid that it appears to be still glowing from the fires of past ages. Cardinal Throne, a huge volcanic butte, rises from the center of the basin to dominate the scene. At the foot of Cardinal Throne, a branch leaves the main road and follows the east slope of Pilot Knob. The road passes through a section known as Robbers' Roost, the appearance of which justifies its title and brings within the bounds of credulity some of the tales that have been woven around it.

During the Panamint City boom, Tiburcio Vasquez and his gang of Mexican bandits, fresh from successful marauding expeditions in other sections of the state, took up their abode in the rocky embattlements surrounding Fire Hole. From the topmost points, enemies could be seen miles away. Countless recesses and caves afforded perfect concealment from the law and permitted Vasquez to carry on his depredations against passing stage coaches at will. Occasional forays against the stage station a few miles distant served to break the monotony of his regular pastime and to keep his larder well filled.

Legend of Missing Stage

One of the misdeeds attributed to Vasquez and his band was the complete disappearance of a stage coach with all its occupants. I first heard the story from Miss Finley who stated that she in turn had heard it from an old-timer who was passing through Copper City. I later mentioned it to F. V. Sampson, Barstow's desert photographer. He too, had heard the story, but with meager details. Somewhere in the fastness of the region may be hidden the conclusive evidence of the bandit's crime. Or the story may be just one of those yarns that are intended only for campfire consumption. I am inclined to believe the latter, but—*Quien Sabe.*

In Barstow I had heard some one refer to Grace Finley as the "Copper Queen."

I mentioned this jokingly. She laughed. "Yes, if that little shack over there is a palace and that old mine dump up there a throne, perhaps it is a very fitting title."

Later as I stood on her proposed building site and noted the gorgeous panorama spread out before me, I could not help but reflect that if her success justifies the title, Nature already has provided a setting for the throne. From an elevation of 4000 feet the rolling slopes of Superior valley flow downward to merge with three dry lakes, 14 miles away. During the spring months this area is one of the wildflower show places of the Mojave

desert. Blankets of color that can be seen for miles cover the whole surface from the dry lakes to the mountains.

Miss Finley refers to the dry lakes as her "door-bells." Visitors travelling across the playas send up a cloud of dust that announces their coming a half hour before they arrive.

The week days are busy days for Miss Finley but Sunday finds her graciously greeting visitors that come her way. She likes people and conversation and is always eager to share some new bit of scenery or botanical find with her guests. To the uninitiated, the desert spells only desolation and danger and the invariable question is: "Why do you live out here alone? Aren't you afraid?"

Grace Finley's answers are simple and

direct. "I love the desert. There's nothing to fear."

In the hell-roaring days of the old West, the mining gentry were apt to spend their leisure moments in ways not conducive to a long and lasting life. Copper City's young prospector finds her relaxation in—writing poetry! It's good poetry, too—children's poetry.

As I summed up the accomplishments of Miss Finley, from her early prospecting efforts down to building a half-mile road to her cabin, my thoughts went back to a part of the first editorial in the first issue of the Desert Magazine: "To those who come to the desert with friendliness, it gives friendship; to those who come with courage, it gives new courage." Grace Finley has acquired both.

This is no Place for Drug Store Cowboys . . .

"This is a contest of cowboy sports, open to cowboys who are sportsmen, so if you don't think you can win without help, or are afraid of getting hurt, get a grandstand seat instead of a receipt for entrance fees."

This paragraph, taken from the rules governing the annual Frontier Days program at Prescott, Arizona—to be held July 4-5-6-7—gives a revealing glimpse of the type of show these northern Arizonans stage every year for the entertainment of their guests.

Located in the heart of one of the finest ranges in Arizona, Prescott draws its performers direct from the cow camps. They are riders—not showmen. But because they are the cream of the fraternity, they always put on a good show.

Prescott has been holding these July cowboy events for so many years that only the old-timers remember the first one—53 years ago.

It is a non-professional contest. Any rider may enter any event in which during the last three years, he has not won as high as second place in the finals of any of the major rodeos or cowboy contests in which points are recognized for national and world championships.

Prescott's show is a non-profit event, sponsored entirely by civic leaders in the community—and its long and successful record is evidence of its popularity with both riders and spectators.

It is a department of the northern Arizona State Fair association activities. Co-operation is given by the Yavapai Associ-

ates, representing the chambers of commerce of Ash Fork, Jerome, Prescott, Seligman, the Kirkland, Mayer and Humboldt districts, the Cottonwood Progressive and Camp Verde Improvement associations, Arizona Cattle growers, Arizona Mohair growers, Yavapai county council ASMOA, the county agricultural agent's office, the City of Prescott and the Yavapai county board of supervisors.

Arena management and direction of the program is in the hands of A. T. Spence, well known and liked cattleman and cowboy, of Ash Fork.

The community organization sponsoring the event is directed by C. C. Jackson, of Kirkland, general chairman; A. A. Johns, vice chairman; M. B. Haseltine, treasurer, and Grace M. Sparkes, secretary. Active committees are serving in all branches. Dr. E. C. Seale, president of the Prescott chamber of commerce, is chairman of the finance committee with Joe Heap, assistant.

Situated in the rolling pine-clad hills of the mile-high plateau that stretches across northern Arizona, Prescott is a natural mecca for the dwellers of the desert lowlands when summer months come, and because of its popularity with summer vacationists, has provided comfortable accommodations for many thousands of visitors.



The old prospector with his pick and pan and burro is still roaming the desert hills. But there is another kind of prospector abroad in the land—a scientific fellow who goes out in the dark of the night with a mysterious contraption that identifies certain types of rock by the way they glow when a magic ray of light is turned on them. Here is the story of a great mineral discovery — made possible by one of science's most modern achievements — the ultra-violet lamp.

By HULBERT BURROUGHS

Equipped with a portable 75-pound generator and a large ultra-violet ray lamp especially constructed by Thomas Warren (left) of the Ultra Violet Products Co., Oliver Adams (right) prospected for tungsten and made what promises to be one of the greatest mining discoveries in the past 25 years.

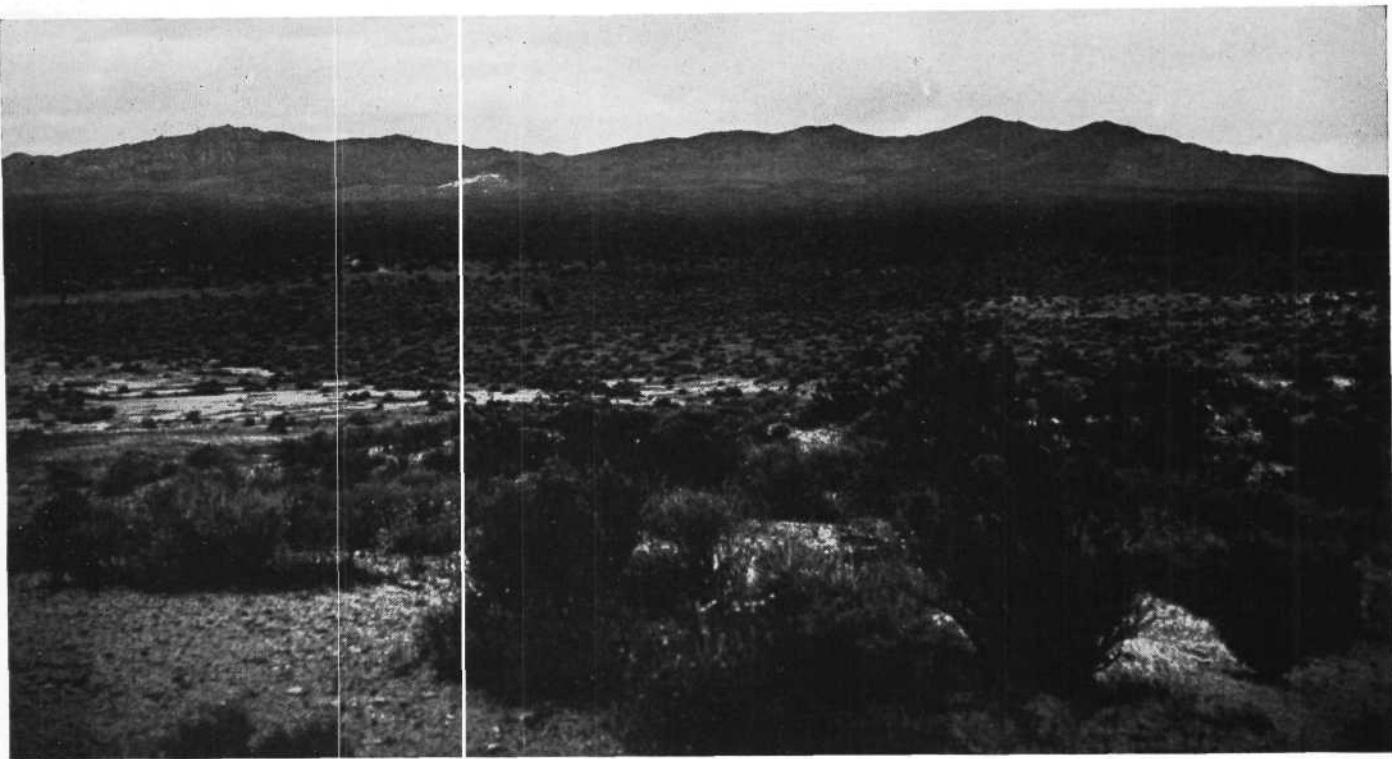
Night Prospector

JULY 22, 1937, was a typically hot summer day on the desert west of Adelanto, California. A dusty coupe strained through heavy sand on he seldom-used road.

"Mirage Valley is right!" thought Oliver Adams as he forced his boiling car

on toward low Shadow mountain, shimmering in the midday heat a few miles ahead.

Suddenly the tires sank into deep sand. Adams tried to dig out, but it was useless. The sun beat down pitilessly upon him. His water was low.



Shadow mountain near Mirage valley in the Mojave desert is 40 miles northwest of Victorville, California, and about 40 miles south of the famous Atolia mine, second only to Mill City, Nevada, as the most productive tungsten deposit in the United States, and one of the richest concentrations of scheelite in the world. The white area in the range to the left of the middle of the picture marks the location of the Shadow mountain mine which may prove even richer than the Atolia mine.

Fortunately for Adams he had seen a group of men working a small mining claim a few miles back. After a grueling walk he reached their camp. The men who gave him water and towed his car from the sand were the Baxter brothers, working a small tungsten mine on the south side of Shadow mountain in Mirage valley.

Strange twist of Fate, reminisced Adams later, that this incident—getting stuck in the sand—should be the first of a series of events that eventually led to an important discovery.

It was several weeks later that Adams picked up a newspaper and read a small item stating that the mineral scheelite, in which tungsten is found, is one of those rocks which fluoresces under ultra-violet light. Also that mining men were using small ultra-violet lamps to test tungsten concentrates in their mills.

Tungsten! Wasn't it tungsten those two brothers were mining out near Shadow mountain that hot July day? Then Adams had another idea. If scheelite fluoresces in ultra-violet light, why not go out to Shadow mountain and actually prospect for it at night? As far as he knew it had never been done—but why wouldn't it work?

Eagerly he prepared for his Shadow mountain adventure. He waited for a moonless night—dark so that the fluorescent scheelite, if he found it, could be seen. Unlike old-time desert prospectors with pack burros, pick and shovel, Adams was equipped with a small portable ultra-violet lamp and batteries. Across the northern slopes of Shadow mountain he trudged one cold winter night.

From one rocky outcropping to another he worked. Presently a lifeless rock began to glow. Here and there tiny diamonds of beautiful bluish-white light sparkled. He chipped away some specimens of the rocks.

Next day in Los Angeles an assayer told Adams that the dull grey rock he brought in was scheelite containing a good percentage of tungstic acid.

Naturally he was excited. But at that time he had no con-

ception of the extent or importance of his discovery. He did know, however, that the U-V lamp he had been using was far too small. Its feeble rays would not travel effectively more than a few inches. It forced him to prospect almost on his hands and knees.

To solve this problem he went to Thomas Warren of the Ultra Violet Products corporation. Said Adams, "I want an ultra-violet searchlight. I want to send a beam of light all over those mountains. Have you got one, or can you make me one?"

Such a lamp was, of course, out of the question. But Tom Warren did construct the largest ultra-violet lamp that had ever been made.

Armed with this big portable lamp and a 75-pound generator, Adams soon learned that his discovery on Shadow mountain was a real "gold mine" of tungsten ore. The ground at night actually sparkled with scheelite crystals.

Several months later after preparatory mining operations had been launched, Adams felt that the time was ripe to announce his discovery to the mining world. He invited a group of leading California mining engineers to meet him at the Shadow mountain site at three o'clock one winter afternoon. He told them about his discovery; of the use of ultra-violet rays to find scheelite.

It was my good fortune to be present that afternoon. But I'll confess I was not impressed with the rock Adams pointed out as he led the way to various places on Shadow mountain. He showed us ore that he said was rich in tungsten. To me it looked no different from the rest of the rocks covering the hillside. In fact I overheard some of the mining engineers express similar skepticism. Certainly no human eye could pick and identify tungsten-bearing scheelite. Everyone knew that the only reliable way was the tried and true assay method.

Adams told us we were walking upon and looking at what was probably the richest tungsten deposit in the United

States. He pointed to several areas which he said were especially rich. Visibly they were no different from others. He warned us to remember these areas when night came.

I'm certain many of those engineers were disappointed after making the long trip from Los Angeles. But it would not be courteous to leave now. Their host had prepared a fine evening meal.

Adams had planned that party carefully. As soon as dinner was over and darkness had come, he announced that we would now see the main attraction of the day. He started the motor of his 75-pound electric generator attached to a stretcher carried by two men. Tom Warren of the Ultra-Violet Products corporation brought out two of his large bell-shaped ultra-violet lamps and attached them by long cords to the generator.

Adams led the way with a flashlight. He stopped first in front of a big rock cairn he had shown us in daylight. At night it looked even less interesting. He turned out his flashlight. It was a signal to Warren.

The ultra-violet lamps glowed a bluish-purple. As the rays struck the cairn, the dull and lifeless pile of rocks became a sparkling galaxy of bluish-white stars. Thousands of scheelite crystals fluoresced beneath the magic ultra-violet light. And it did seem like pure magic.

The uninterested mining engineers themselves began to sparkle back to life. We walked further—to the lifeless beds of "ore" we had seen in the afternoon. Various areas gleamed brighter than others. They were the ones Adams had said earlier were particularly rich in tungsten.

Mountain That Sparkled Like Jewels

Everywhere we went the ground sparkled like a tray of brilliant jewels. It was like nothing I had ever seen before. I had known, of course, that certain minerals possessed a fluorescent quality when subjected to ultra-violet rays. But a veritable mountain of glittering lights! It seemed incredible.

Tom Warren told me of the uses to which these invisible rays have been put. Scientists have long known that certain minerals radiate a faint colored light when subjected to ultra-violet rays. This phenomenon they called "fluorescence." Physicists explain it in this manner: U-V rays of comparatively short wave lengths cause electrons in the atoms of the fluorescent mineral to leave their orbits ever so slightly. This orbital disturbance results in a loss of energy which manifests itself in the form of visible rays which we recognize as light.

Tests have shown that some 300 different substances fluoresce—each with a light of its own characteristic color. This offers scientists a means of identifying unknown minerals. In many cases a trained observer can also tell by this fluorescent color exactly what part of the world the mineral came from.

Chief source of ultra-violet rays, of course, is the sun. We all know of their importance to health in causing the skin to produce Vitamin D. The rays are produced artificially in quartz glass tubes filled with argon gas and mercury vapor through which a current of electricity is passed. The principle is identical with that employed in neon lights.

These artificially produced rays are more easily controlled than those coming from sunlight. Their fluorescent-stimulating quality thus has many practical uses, ranging from the fluoroscope for examining broken bones, to criminology and law.

Oliver Adams made an amazing discovery one night while prospecting with the U-V lamp. As he walked slowly along, the lamp suddenly illuminated fluorescently a beautiful nugget of pure tungsten-bearing scheelite. It was the largest solid piece he had ever seen. Excitedly he reached for it. To his amazement the "nugget" scurried away! No one yet knows why scorpions fluoresce almost the same color as scheelite.

An experienced U-V lamp operator working in the field is quickly able to ascertain the value of the deposit. He can



Above—A six-foot monument of apparently ordinary rocks marks one of the claims of the Shadow mountain mining company.

Below—The same pile of rocks at night under the ultra-violet lamp shines like a thousand glow-worms. Each little crystal of tungsten-bearing scheelite fluoresces with a bluish-white light.

even estimate what the value will run per ton solely on the basis of the color and brilliance of the scheelite crystals.

Old-time tungsten miners handling the ore for years were never certain of their scheelite deposits without recourse to lengthy and costly assays. The time and money saved by the use of ultra-violet rays over those old methods of analysis are incalculable. In actual mining operations the lamp instantly differentiates rich ore from the unproductive.

The Shadow mountain mine is the first ever to have been discovered and surveyed for actual mining by the sole use of ultra-violet rays.

The Shadow mountain discovery may prove to be the largest tungsten deposit ever found in this country. The value to the U. S. of such a find is difficult to calculate. Because of its high melting point and great hardness, tungsten is invaluable in the manufacture of high-speed tool steels, electric light filaments, radio tubes, contact points for motor ignitions, airplane and automobile valves, and even phonograph needles. The superiority of tungsten steel over old carbon steel results in a conservatively estimated annual savings in the U. S. alone of close to \$4,000,000,000.

Of greater immediate importance, however, is the use of tungsten for the manufacture of war materials. Without tungsten these vital products could never be produced in great quantities at high speed. In 1937 the world armament race

resulted in an all-time world high for tungsten production when 42,250 tons were produced as against the former high in 1918 of 35,200 tons. What the consumption is during the present world crisis is impossible to calculate, but it must be tremendous. During the first World War the price of tungsten rose from \$7.50 per unit of 20 pounds of concentrate to over \$35.00. A few producers sold tungsten as high as \$100. a unit.

The United States is one of the world's largest consumers of tungsten. It imports between 60% and 90% of its requirements—most of which comes from China and India, world's largest producers.

If that foreign supply of tungsten were cut off, it is questionable whether this country could produce enough of its own to meet a war-time emergency. Hence the national importance of Oliver Adams' Shadow mountain discovery. At present the reserve supply of mined concentrates in the U. S. is large. Because of this the price of tungsten has not risen greatly with the coming of the European war. But when that supply is gone, and if conditions abroad are such that the normal supply from China and India is cut off, what then?

Perhaps like Oliver Adams, other modern night-time prospectors with the infallible ultra-violet lamps may uncover upon our deserts more unsuspected tungsten deposits which will make the U. S. independent of a foreign supply.

SIDEWINDER SAM

—By M. E. Brady



Prizes to Amateur Photographers . . .

Each month the Desert Magazine offers two cash prizes for the best camera pictures submitted by amateur photographers. The first award is \$5.00 and the second \$3.00.

Pictures are limited to desert subjects, but there is no restriction as to the residence of the photographer. Entries may include Indian pictures, rock formations, flowers and wild animals, canyons, trees, waterholes — in fact everything that belongs to the desert country.

Following are the rules governing the photographic contest:

1—Pictures submitted in the July contest must be received at the Desert Magazine office by July 20.

2—Not more than four prints may be submitted by one person in one month.

3—Winners will be required to furnish either good glossy enlargements or the original negatives if requested.

4—Prints must be in black and white, 3 1/4 x 5 1/2 or larger, and must be on glossy paper.

Pictures will be returned only when stamped envelopes or photo-mailers are enclosed.

For non-prize-winning pictures accepted for publication \$1.00 will be paid for each print.

Winners of the July contest will be announced and the pictures published in the September number of the magazine. Address all entries to:

Contest Editor, Desert Magazine, El Centro, California.

Only the hardiest travelers went to Grand Canyon a half century ago. The approach roads were rough and the trail to the bottom of the gorge was a nightmare. But Capt. John Hance was there as guide and packer—and to make sure that the tourists got their money's worth he entertained them with tall tales of his exploits in that region. John Hance is dead now—but his reputation for true western hospitality—and wild yarns—still lives.

Captain John Hance

He Built Trails and Spun Yarns at Grand Canyon

By FRANK C. LOCKWOOD

*Author of
"Pioneer Days in Arizona"
"The Apache Indians"*



This photograph of John Hance taken in 1884. Photo reproduced by M. M. Evans from an old print in possession of George Hockderffer.

S AID Buckey O'Neill, "God made the canyon, John Hance the trails. Without the other, neither would be complete." And a distinguished traveler, Chester P. Dorland, wrote in the guest book in which visitors used to record their impressions after seeing the canyon: "Captain John Hance,—a genius, a philosopher, and a poet, the possessor of a fund of information vastly important—if true. He laughs with the giddy, yarns to the gullible, talks sense to the sedate, and is a most excellent judge of scenery, human nature and pie. To see the canyon only, and not to see Captain Hance, is to miss half the show."

Early Arizonans asked no questions about a comrade's past. I have talked with many of Hance's old friends, but none of them can say with certainty what state Hance came from. If anyone questioned him concerning his past, he would go straight up into the air, and reply that he did not like ancient history.

A few years ago, fearing that the Hance tradition might perish, I invited three very distinguished gentlemen who

knew Hance in the heyday of his fame, to dine with me. The conversation that evening revolved about Captain John Hance and his stories of the Grand Canyon. My guests were Dr. D. T. MacDougal, Godfrey Sykes, and Dr. A. E. Douglass—scientists all three, yet *raconteurs* and artists, too. The symposium developed something after this manner:

Lockwood—Dr. MacDougal, can you call up a picture of Hance—his personal appearance, and habits?

MacDougal—I would say he was a weathered, hard-bitten, hard-boiled man—not so very tall—a sharp face—the top of his head rather square. His voice was a sort of high falsetto as he approached the climax of a tale—like Teddy Roosevelt's voice. He was very spare and erect, and he walked on his heels. I have seen him going down the canyon with a load on his back, putting his heels down hard, and looking back over his shoulder saying to those behind, 'Yes, yes, yes.'

Lockwood—When was the Hance trail opened?

MacDougal—I went down it in 1891. It had then been in use for several years. Hance always took people down on foot, and at that time his trail was the only one into the Grand Canyon. The fact is his whole livelihood was dependent on those who went to his camp and stayed there. One would arrive at his place and spend the night, and Hance would pack the grub down for the trip. However, he wouldn't carry the blankets.

Lockwood—Did he operate independently, or was he employed by some company?

MacDougal—He was on his own at that time.

Lockwood—When did he become a professional liar and story-teller?

MacDougal—Oh, when he was born! Here is an example of the instantaneous character of his imagination. I remember meeting him in Flagstaff about two years after my first visit to the canyon. I ran into him on the street close to Donahue's saloon, and said, 'How are you, Mr. Hance? I was up to your place recently.'

'How long are you going to be in town?' he asked.

To make conversation, I said, 'Well, how is the canyon?'

'Oh,' he said, 'they are filling it up.'

'Well, that's interesting,' said I.

'Yes,' he continued, 'those — — — tourists that I take out kick so much gravel into it that they're filling the thing up.' I don't believe he ever told or thought of this before.

I saw Hance at the canyon again in 1903. He was then employed by the hotel people, just a privileged guest. Later on, he was given his own cottage and bed and meals by the Harvey company so that he would stay around and entertain the sightseers. On this occasion I saw him in the middle of the room talking to various people. Walking over to him, I said, 'My name is MacDougal—I went down your trail some years ago.'

'What did you think of the canyon?' he asked. I replied, 'Every time I return, it is grander than I remembered it.'

'Now, what do you think of that?' Hance asked triumphantly. 'Some of these old guinea hens' (he waved his arms around including the groups of tourists around him) 'think there's nothing to it!'

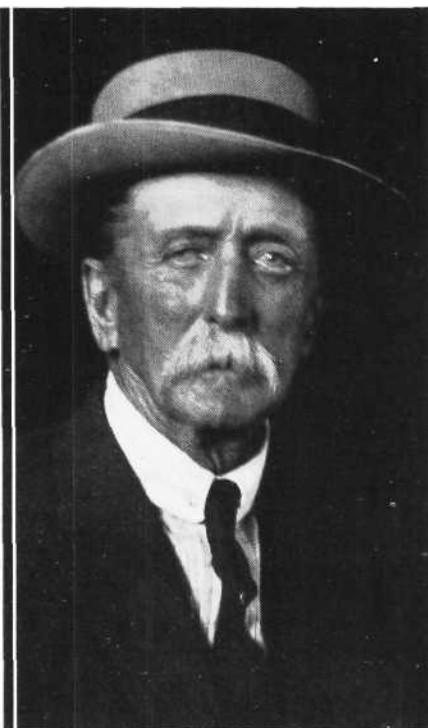
'Well, Mr. Hance,' I continued, 'how have you been?' 'Oh,' said John, 'I have had lean years—all these years I've lived on expectations and mountain scenery.'

I heard him tell this soap story to the 'guinea hens' at El Tovar. He began by saying that upon one occasion the snow became so heavy up at the rim of the canyon that there were no longer any visitors and he decided to go down to Flagstaff and spend the winter.

Said he, 'It was a delicate job to know just when the winter was actually beginning. Each season I timed my departure with references to two things: the lowness of my grub supply, and the near approach of a heavy snowfall. One night when I was all set to get out, a terrible storm came. It lasted two or three days. I contrived a pair of snowshoes and started from camp. After half a day's travel with these snowshoes, fashioned from split pine, I fell and hurt my ankle so badly that I could not go any farther. However, I managed some way to work my way back to the cabin.'

'When I got there, I found there was nothing left but half a jar of sorghum molasses and a box of Babbitt's Best Soap. I prepared a mixture of soap and molasses in a skillet, slicing the soap into flakes, and adding a few shavings from an old boot leg to make the mixture as tasty as possible. Ladies and gentlemen, that was all I had to eat for a week, when the snow melted. I tell you frankly, and I expect you to believe me, I have never liked the taste of soap from that day to this.'

Every morning he would tell that story



Picture of Capt. Hance in 1912.
Photograph, courtesy Fred Harvey company.

at the breakfast table. There would be a dead silence after he had finished, the people not knowing whether to laugh or not.

Lockwood—Can you tell us one of the stories he used to tell about the canyon, after he was employed by the Harvey hotel as official guide?

Sykes—Here is a botanical item. He was guiding a party down the trail one day and there was a young lady in the company who was interested in botany. As she went along she was picking leaves from the various trees and plants, and was examining them and talking about them. Finally she said:

'You know, Mr. Hance, the tree is a wonderful organism—it really breathes.'

John thought a moment. 'Why, yes,' he said, 'it does.' Again he reflected. 'You know that explains something that has puzzled me a long time: I used to make camp under a big mesquite tree, and night after night that thing would keep me awake with its snoring.'

MacDougal—And here's another gem from the realm of science. John was commenting on the water of the Colorado river. 'It was so thick with the mud,' he said, 'that it was positively tough. One noon I kneeled down for a drink, and when I tried to stop I was almost drowned before I could get my knife out of my pocket and cut it off.'

Sykes—Hance described how a 'tourist person' came up to the canyon one morning and looked over the rim. The day was damp, and he had on a pair of rubber boots. He leaned out a little too

far and fell over. He was able to keep an upright position, so when he struck the bottom he bounced. Naturally he came up past the rim again. This was repeated several times, but he was never able to grab hold of the rim. 'In the end,' said John, 'we had to shoot him to keep him from starving to death.'

MacDougal—When I saw John in 1898, he had sold one of his mining claims for \$10,000. He was telling about it, asserting that he still had a lot of valuable claims. He had taken the \$10,000 and gone to San Francisco. His money lasted 10 days.

'We had a pretty good time; but I tell you that although I spent \$1,000 a day each day I was there, thousands of people in San Francisco didn't even know there was such a person as John Hance. Sometime I'm going to get about \$50,000 and wake that town up.'

* * *

In July 1933, I had the good fortune to interview Edgar Whipple, a very old man who had lived in Coconino county for more than 50 years. During a whole generation he and Hance were intimate friends. Hance came to the Grand Canyon, Whipple thinks, between 1881 and 1884. He made his headquarters at Williams during the early days. It was there, and at the canyon, that Whipple became acquainted with him. Before tourists began to visit the Grand Canyon, Hance and other old hunters and prospectors had made their way down into the chasm with pack burros on prospecting trips. Hance's first expeditions as a guide were over these dangerous burro paths. Little by little, these routes were smoothed and broadened to some extent, the hunters, cowboys, and prospectors doing their bit, until finally Hance was able to take tourists down. He was the first one to do this. Even then, part of the descent had to be made by means of ropes.

It was a long time before Hance found a route that he could travel on horseback. On one of his trips he lost a fine horse. It stepped on some loose stones and went over the brink into the chasm.

In the early days of the tourist business he had his camp about 15 miles east of El Tovar at a spring where Bill Hull watered his sheep. Here Hance erected a tent for his guests, and here Lyman Talfrey opened a crude tourist hotel. A stage ran from Flagstaff by way of Williams. Tourists now began to come in rapidly; so Talfrey brought in his wife and two daughters. It required several tents to provide accommodations for the guests. Hance early acquired squatter's rights to a ranch near his trail. Here, about 1884, we find him established—a landmark and a marvel, scarcely less wonderful than the canyon itself.

Whipple knew every one of Hance's stories by heart, and related them with gusto: "John had a splendid horse that

would do anything for him. One day he decided that this steed could jump the Grand Canyon, and he determined to make him do it. He believed that the all-important thing was to get a good start before taking off. So he went back three miles and ran his horse full speed to the rim. The take-off was very successful.

"But," said Hance, "I wasn't half way across before I saw that he couldn't make it. We hadn't taken a big enough start."

"Well, what happened?"

"Oh, I just turned him around and went back."

In the Captain's cabin hung a pair of snowshoes that his guests used to view with admiration. One day a heavy fog completely filled the gorge. A group of tourists were hanging about the rim trying to see down into the canyon. Hance came along and took a look into and across the depths.

"Well," he remarked, "the canyon's just about right to cross."

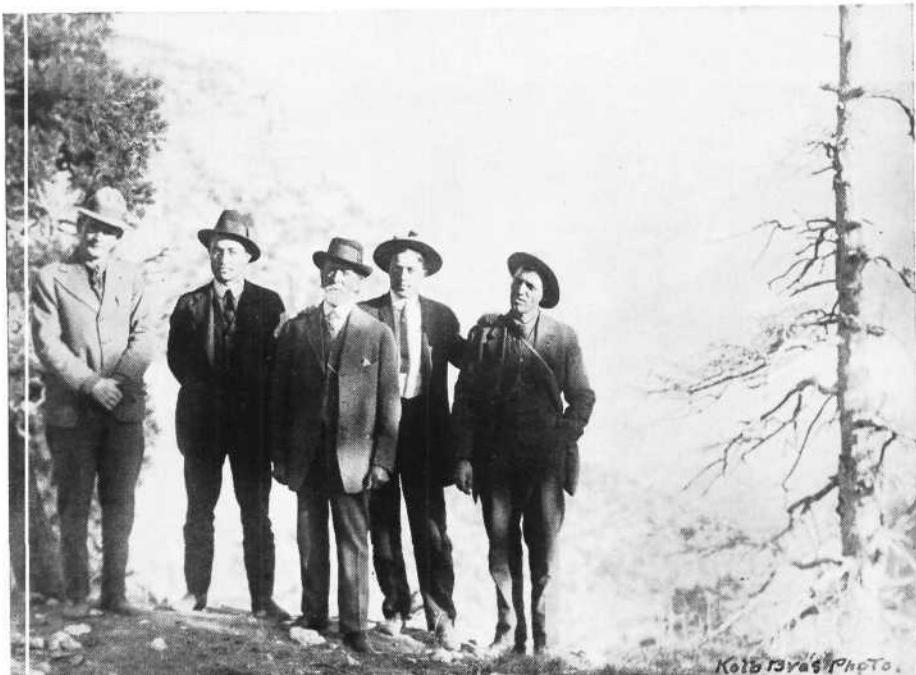
"What do you mean?" someone asked.

"Why, I can put on my snowshoes now and go right across on the fog."

"He then told how one time he had gone over thus, and had stayed too long.

"The fog went out and left me on the other side, without food or drink. I had been marooned three or four days when it returned, though not so thick as before. I had grown very light by this time and got across all right, though the fog was so thin in spots that several times I thought I was going to hit the bottom. I sure did fill up when I got back on this side."

Hance was once out hunting his pack animals. Trailing them over to where



This picture was made by Emery C. Kolb about 1917. The men are (left to right) Dick Gilland, Jimmie McMurdo, Capt. Hance, S. D. Pippin and Leo Krauskopf.

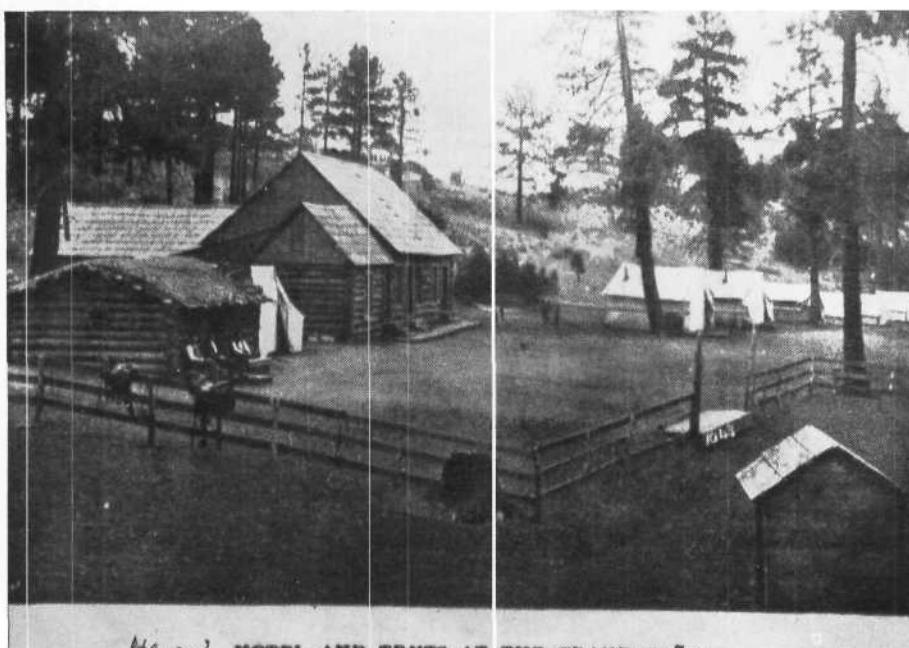
came up with a band of Supai Indians who were hunting rabbits with bows and arrows. They came across the track of an old bear that had wandered out that way, and one of the hunters shot an arrow into him. The bear at once took after the Indian; but he was no sooner in pursuit than up rode another brave and discharged an arrow at him. Again the bear wheeled to chase his latest assailant—only to receive a shaft from a third Indian who now entered the fray. So it went for a long time, until the enraged Redhorse wash enters the canyon, he

beast looked like a huge porcupine, and bellowed and frothed with fury.

"In chasing back and forth," said Hance, "they got up near where I was, and the bear was now so mad that I began to think he might take after me. And sure enough, after me he came. I made a dash, with the old bear right behind me. Every minute I thought he'd get me by the pants. I sighted a big pine ahead with a limb about 30 feet up, and I concluded I would have to get that, or the bear would get me. So I made a big jump for that limb—the biggest jump I ever made in my life. I missed it entirely! That is, I missed it going up, but I caught it coming down."

One of Hance's oldest surviving friends is Mrs. Elizabeth B. Heiser of Flagstaff. Of German extraction, lowly origin, and endowed with an original and pungent gift of language, she is scarcely less colorful than Hance himself. In the '80s she shared the rough life of the cowboy and the prospector, and was often in the saddle with them—a brave and valuable comrade. Naturally, therefore, her diction is blunt and racy with a strong smack of the soil and the corral. It cannot, of course, always be rendered verbatim. Hance was her near neighbor, and they were loyal friends to the last. She recounts his deeds and interprets his personality with almost lyric fervor.

"I met him first about 1890. At that time he lived in his own cabin and had his own trail. Me and Heiser had a few cattle up near the canyon and I was out on the range with the men a good deal. The way Hance came to go out there



Hance's HOTEL AND TENTS AT THE GRAND CAÑON.

This is a picture of the Hance camp at Grand Canyon in the '90s. Courtesy Fred Harvey company.

first was because there was prospecting out there—a paint mine—asbestos mine, and copper; but none of them was producing for lack of water. His first trail was for the prospectors to go down. There was no road even out to the canyon then—only a cow trail to Redhorse. There were no tourists then. When they did come, Hance was the first one to take them down.

"I used to hold John's mule while he shod him—you know you have to put a twitch on them; a rope around the hind foot. While he was pounding up the nails he was thinking up some story. Stories came just as natural to Captain John Hance as hunger comes to a boy. He would say, 'Heiser, I've got to tell stories to them people for their money; and, if I don't tell it to them, who will? I can make these tenderfeet believe that a frog eats boiled eggs, and I'm going to do it; and I'm going to make 'em believe that he carries it a mile to find a rock to crack it on.'

"Hance was a slender, straight, imposing sort of man. He kept himself clean. He always washed his frying-pan, knife and tin cups and plate after each meal. He never left them on the shelf for the mice to dance in. He always kept his cabin in order, too. His front door was swept and his yard was always clean. He was happy and serene—never got into the dumps. If his mule fell over the cliff and broke his leg, or the pack animal ran away, he was always calm. 'The Lord will send it back again,' he would say. Just so long as he had his coffee and dough-balls, that was all he cared for.

"John really read and thought a good deal. He believed in one God. He was fair to man. You never went to John Hance without getting something to eat. Though he rarely had money, no one was ever refused warmth and food—white, Indian, or black. Everyone liked him. When the tourists would come back from year to year, they would always ask about him, and would bring him little presents—a handkerchief, or a bag of nuts or candy, or an apple or orange. Candy was his weak spot. You could coax him across the river with a bag of candy. Women, men, and children liked John Hance. If a child was around him for a day, you would have to coax it away, for he always found something new to interest a child.

"John Hance loved nature. He was fond of squirrels and chipmunks and made pets of them. Never did he kill anything except for meat; nor did he ever mutilate timber, or cut down a tree unless it was necessary. He fully appreciated the beauty and grandeur of the canyon. That was what kept him there. He wanted to be buried there, and he was."

DESERT QUIZ

How wise are you in the lore, the geography, the history, the sciences of the desert? Here is an opportunity to answer that question for yourself. These 20 questions are based partly on a practical acquaintance with the desert Southwest, and partly on a knowledge that comes from reading. The test covers a wide field of subjects, and if you check 50 percent of the answers correctly you are better informed than the average person. A dyed-in-the-wool desert rat should know 15 out of the 20—and those super-humans who score 16 or more properly belong to the fraternity of Sand Dune Sages. The answers are on page 28.

- 1—In summer the desert visitor is more likely to encounter sidewinders—
Sunning themselves on the sand dunes.... In the shade of rock crevices....
On the sand dunes after dark..... Around desert waterholes.....
- 2—Tuzigoot national monument is located in the state of—
New Mexico..... Utah..... Nevada..... Arizona.....
- 3—Javelina is a name commonly used in the Southwest for—
Spear-like weapon used by the Cocopah Indians.....
Species of wild hog found in southern Arizona.....
Birds that nest in fissures in the rocks.....
Member of the lizard family.....
- 4—The new diversion dam now being constructed at Headgate rock near Parker, Arizona, is designed primarily to—
Supply irrigation water for Colorado river Indian reservation.....
Irrigate the Chuckawalla valley of California.....
Furnish additional power for the City of Phoenix.....
Control floods in the Bill Williams river.....
- 5—Joshua trees belong to the botanical family of—
Palms..... Cacti..... Conifers..... Lilies.....
- 6—Name of the frontiersman who established the stage line from San Bernardino to the La Paz gold fields was—
Bradshaw..... Butterfield..... Banning..... Weaver.....
- 7—The main dam which stores water for Salt river valley farmers in Arizona was named in honor of President—
Coolidge..... Teddy Roosevelt..... Hoover..... Franklin Roosevelt.....
- 8—The tallest tree native of the Southern California desert is the—
Smoke tree..... Mesquite..... Ironwood..... Washingtonia palm.....
- 9—McNary, Arizona, is known for its—
Gold mines..... Lumber industry.....
Indian crafts work..... Scenic rock formations.....
- 10—The famous Mormon Battalion was recruited to—
Aid the conquest of California..... Help colonize Utah.....
Open a new Northwest trail..... Guard the Santa Fe trail.....
- 11—Indians who call themselves "Dine" are the—
Yuma..... Hualapi..... Mojave..... Navajo.....
- 12—Death Valley was given its name by—
Jedediah Smith..... Death Valley Scotty..... Members of the Bennett-Arcane party..... Pacific Borax company.....
- 13—The astronomical name for the north star is—
Venus..... Jupiter..... Polaris..... Mars.....
- 14—Saguaro cactus belongs to the genus of—
Opuntia..... Cereus..... Echinocactus..... Mammillaria.....
- 15—Ed. Schieffelin was the name of the man credited with the discovery of—
Gold at La Paz..... Casa Grande ruins.....
Silver at Tombstone..... Potash at Trona.....
- 16—The most common ingredient of the sand found on the floor of the desert is—
Quartz..... Manganese..... Gypsum..... Limestone.....
- 17—Screwbean mesquite was given its name because of—
Narcotic effect of the bean..... Peculiar curling of the leaves.....
Shape of the trunk..... Shape of the bean.....
- 18—The historic Tinajas Altas watering place is located on the edge of—
Lechugilla desert..... Death Valley.....
Escalante desert..... Tonto basin.....
- 19—Most exhaustive written works on the Anza expedition were prepared by—
Bandelier..... Coues..... Bolton..... James.....
- 20—Queho was the name of a notorious Indian outlaw in—
Lincoln county, New Mexico..... White mountains.....
Southern Nevada..... Morongo valley.....

Not many of the luxuries of civilization make their way to the arid summit of Ghost mountain where Tanya and Marshal South and their two small sons are living virtually a Swiss Family Robinson existence—but they do have "strawberries." Not the kind of berries you or I would buy at the market, but a delicate little fruit that grows on spiny cacti. In his diary this month Marshal tells how some of the food problems in their desert existence are solved.

DESERT DIARY

June at Yaquitepec

By MARSHAL SOUTH

THE Ghost Mountain strawberry crop is ripe, and this morning Rider begged so hard that we laid aside other work and went out on a gathering expedition.

Our desert "strawberries" have little in common with their civilized namesakes. As fiercely characteristic of the desert as is the Apache Indian they are the fruit of the long spined cactus which grows in bunches or clusters and is variously known as the "hedgehog cactus," the "torch cactus" and the "strawberry cactus" (*Echinocereus engelmannii*).

Their fruits are scarlet, with a network of small white—and particularly villainous—spines. In size they range from that of a large grape to a small plum. Though the job of brushing off the spines and skinning the fruit is a bit tedious the resultant delectable morsel is more than repayment—a little ball of cool snow-white pulp shot through with a multitude of tiny black seeds, like glistening grains of gunpowder. The taste is somewhat reminiscent of the strawberry, but with a flavor individuality which induces a demand for more and more.

Our collecting expedition was a grand success—as to amount collected. But strangely, the baskets we had taken along to bring back the fruit were as empty on our return as at the start. However a pair of contented little "tummies" were visibly expanded. About the best way to pick the fruit is with a loop of yucca leaf, as one picks the fruit of the tuna cactus.

Our desert is aflame with the glory of the mescals. Far down over the slopes and lowlands and striking the summit of Ghost mountain everywhere their swaying banners of yellow gold glint dazzlingly beneath the hard turquoise arch of the hot sky. It is only when their endless ranks of yellow plumed lances stretch away and away through the shimmering heat haze, that one can begin to get some faint idea as to the incalculable number of individual mescal plants that crowd upon the wasteland spaces. Each fountain of bloom represents a cycle run—a long individual history flinging to extinction in one supreme burst of glory. Every yellow banner is the gesture of a departing life. By just the number of plumed lances that dazzles the eye this June will the ranks of the desert mescals be depleted. Yet how stubbornly Nature preserves the balance by slow, new growth. Each flowering—and dying—mescal represents anywhere from seven to 20 years of dogged growth and struggle. Myriads of the slow growing plants pass to extinction each year. Yet the numbers of them that cover the wastelands in the regions where soil and elevation are suitable remain balanced, or seem slowly to increase. For thousands of years the cycle has been running smoothly. There is food for thought here. Either singly or



Like the Indians before them, the Souths derive much nutriment from the seeds of the Chia. Here Rider South is shown harvesting the tiny seeds with basket and a leaf of agave leaf. The plant has matured and the dry seed pods have burst open at the top, ready to be gathered by skillful manipulation of these simple tools.

collectively there are some excellent parables to be gathered from the desert mescals.

These are the days when the tortillas dry upon the roof. That is one of the advantages of the desert spring and summer—there are many things that will "sun-cook." Not only is this the easiest method of cooking but it is also the most healthful. Our roof at Yaquitepec is of iron and almost flat. When the temperature begins to climb it provides an ideal surface upon which to lay out a batch of whole wheat tortillas. A few hours—and one turning—and they are dry and sunbaked enough to lay away in the storage sacks in the big earthenware cookie jar that is a product of our own hands.

The tortilla is another one of those simple things that has an honorable record dating from the dim ages when the earth was young. The simplest baked product of grain it still holds its own on an unshakable foundation of health and honest nourishment which no modern glorified creation of inflated yeast sponge can approach. It was not for nothing that certain periods for the eating of unleavened bread were made mandatory upon the ancients. The old lawgivers knew their people; the craze for things "refined" and the idea of going the Jones and the Smiths one better was as strong in the days of Moses as it is now. Simple things are rarely appreciated—and the tortilla is fundamentally simple. A little meal, a little water—salt and grease if you wish to be luxurious—and for baking equipment a thin, flat stone or a sheet of iron over an open fire.

The other day, in one of the books of Lumholtz—whose exact and delightfully human records of desert and Mexican exploration are unrivaled—I came upon an enthusiastic eulogy of the tortilla. And the baking apparatus which he de-

clared to be the most satisfactory was the same as that which we use ourselves in winter and on other occasions when we employ fire—the flattened side of a square, five gallon coal oil can. Lumholtz, earnest scientist as he was, knew his desert—and his tortillas.

Perhaps one of the chief virtues of the tortilla is the fact that it is, under all conditions, largely uncooked food. It must be whisked from the fire before it is scorched to a chip. Therein lies its tastiness and healthfulness. And never, *never* attempt to use a rolling pin in making tortillas! Theoretically, pressing the dough out to a flat, wafer-like thinness on a board by such means may be all right. But actually it is disastrous. The resultant product, when baked, is a dreadful thing, as tasty as a piece of old leather. A tortilla *must* be patted out by hand, patted lovingly and with the discernment and care of an artist. Then, when the limp disk of dough is of the correct wafer-like thinness, it must be dropped quickly upon the sizzling hot iron sheet, let stand for just the right number of seconds, flicked expertly over, toasted for a like space on the other side, then whisked off. So made, it is a delectable morsel—a little cake over which the gods might fight.

Tortillas should be served and eaten while still fresh and warm if possible. There is significance to the words of the Mexican song—of Villa days:

" . . . I come to thy window,
Porfirio Diaz.
Give him, for charity,
Some cold tortillas . . . "

Nevertheless the tortilla, even when cold, is pretty good too. Those that we sun dry never fail to have the attention of enthusiastic and appreciative appetites. Particularly if Tanya mixes a little honey in the dough, as she often does.

The big rock is gone. It was the last of four—a hunched granite quartet of graduated sizes that, ever since the days of our first tent pitching, crowded upon the north flank of the home site. In those first days they looked too formidable to battle with. We had no tools. And their size made mock of our puny strength.

But steadily, as the house has grown, we have cast thoughtful eyes upon them. And plotted. Now they are vanquished. One—the smallest—we left where it was. It now forms part of a foundation wall of what will be a big fireplace. The second largest succumbed to persistent, gnawing attacks with a heavy hammer. The third was doomed from the day we proudly brought home our first set of miner's drills and iron wedges.

The fourth was different. Huge and squat and flat-topped like an Aztec altar it defied even the drilling for a long time. Drilling holes by hand with steel drill and singlejack is a long process. And the granite was tough; many times it defied the wedges to split it. But, bit by bit, the big rock has been going. Now the last great, unmanageable fragment has been broken into blocks that can be boosted out of the way with the iron bar.

We feel a little sorry for the old monarch weatherer of so many thousands of years of desert wind and sun and storm. But our regret is overbalanced by satisfaction at the greater space his going gives us. Rider and Rudyard however are genuinely depressed. When granite rocks are drilled a fascinating white powder of pulverized stone is spooned from the drill hole. This, with much chatter and consultation, is collected and carefully saved in bottles and cans—later to be used in all sorts of weird experiments, concoctions and mixtures—and so no more powder. Rudyard is acutely glum. And Rider, eyeing his hoarded store of bottled rock dust with much the eye of a thwarted miser, has already begun to offer suggestions as to other rocks that "ought to be broken up."

But the ear of the driller is deaf to hints. Over the gravel lie the jumbled remains of the huge monolith. They have to

be laboriously rolled away before the new walls can go up and the roof beams of the north room can span the space. Somehow the site looks like a quarry just now and the air is still fragrant with the scent of aromatic shrubs and sage that the rolling fragments have crushed.

But already Tanya is planning where the beds shall stand in the new bedroom, when it is built.

SEASONAL FLOODS IN SOUTHWEST BELOW NORMAL ACCORDING TO FORECAST

Seasonal flood run-off in the Colorado river this year will be between 40 and 50 percent below normal, according to estimates of the U. S. Bureau of Agricultural Engineering, based on snowfall reports in the watershed of April 1.

The government report quoted the following figures showing depth of accumulated snow, and water content of the snowpack in the Rocky mountain headwaters of the various tributary streams:

The accumulated snowfall on March 31st was below normal in all areas. The range was from 72 percent below normal on the Rio Grande to 22 percent below on the North Platte.

With normal weather conditions hereafter, the seasonal flow in the various rivers, expressed in percentage of normal, will be approximately as follows: North Platte, 78; South Platte, 57; Arkansas, 50; Rio Grande, 28; San Juan and Dolores, 44; Gunnison, 68; Colorado, 56; Yampa and White, 67. As compared with 1939, the flow in the various rivers this year will be as follows, in percentages: North Platte, 84; South Platte, 57; Arkansas, 48; Rio Grande, 33; San Juan and Dolores, 90; Gunnison, 81; Colorado, 56; Yampa and White, 69.

At the close of March the average depth of snow, with water content, both in inches, on the different watersheds was as follows: North Platte, 21 and 6.60; South Platte, 12 and 6.79; Arkansas, 10 and 2.29; Rio Grande, 5 and 1.64; San Juan and Dolores, 10 and 3.35; Gunnison, 21 and 6.52; Colorado, 19 and 6.17; Yampa and White, 24 and 8.69.

The water content, in inches, on the corresponding date last year was as follows: North Platte, 8.05; South Platte, 4.72; Arkansas, 5.36; Rio Grande, 4.27; San Juan and Dolores, 3.42; Gunnison, 7.54; Colorado, 9.79; Yampa and White, 11.77.

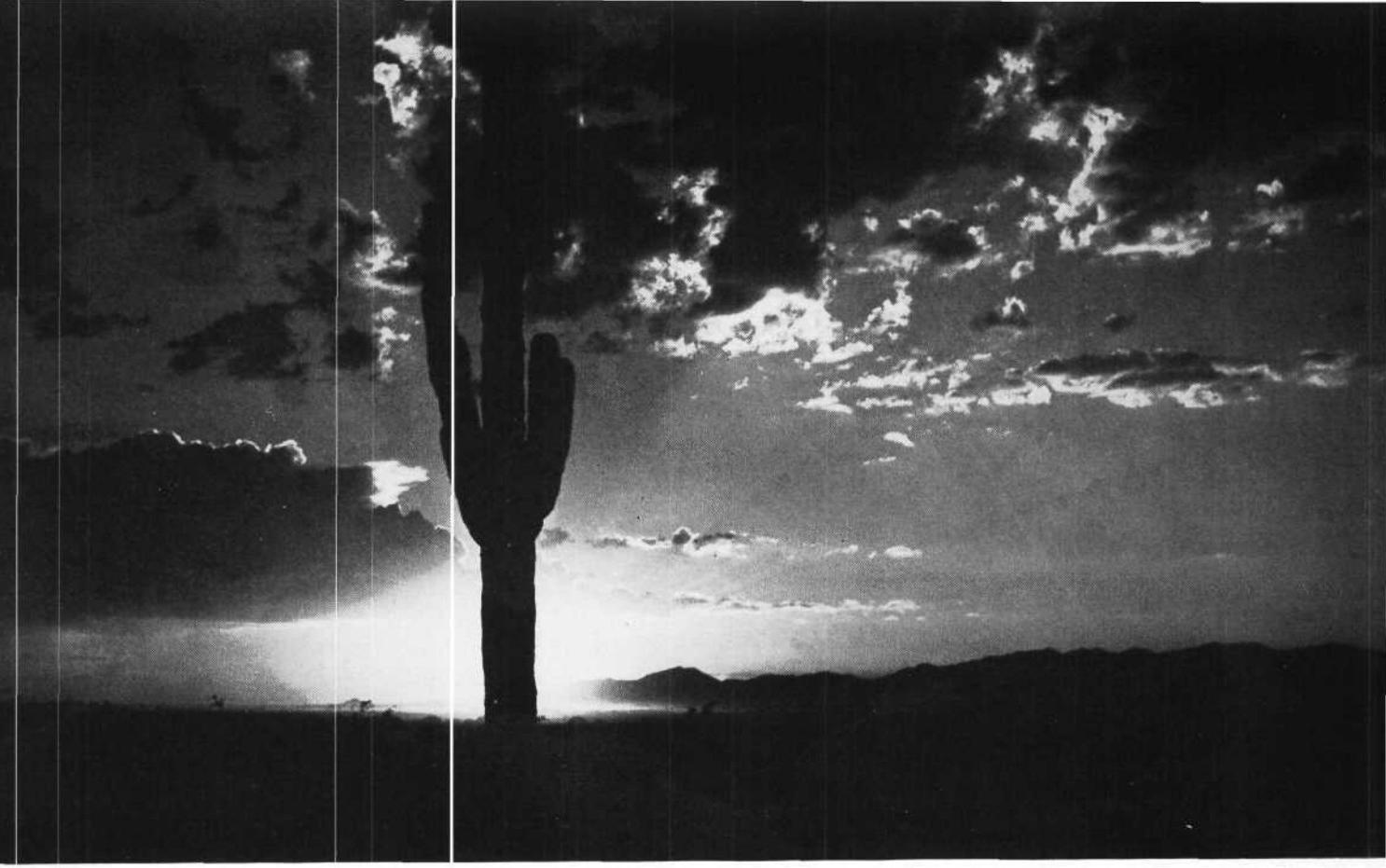
ANCIENT PITHOUSES TO BE EXCAVATED BY UNIVERSITY OF ARIZONA STUDENTS

Summer school students at the University of Arizona are looking forward to important archaeological discoveries this summer when they will be excavating prehistoric Indian pithouse ruins in Forest Dale valley of the Apache reservation in eastern Arizona.

Directed by Dr. Emil W. Haury, head of the department of anthropology, they will excavate for two months in an area defined for the first time a year ago by the university class as a stage of Indian occupation hitherto unknown. Over 700 years of human occupancy can be studied at the location of the ruins which lie south of Showlow. While these pithouses, dwellings dug into the ground, are not so spectacular as cliff and pueblo types, they are of an earlier period, said to date from 700 A. D. to 1400.

Students are to be spared none of the detailed work of excavation. They not only dig, but clean and repair objects found in the pithouses. They interpret the significance of buildings and artifacts, and gain the experience in field work needed for independent archaeological work. After studying, mapping and photographing the ruins excavated, the students will refill the pits in order to preserve them against erosion and for future generations of archaeologists.

At a cost of \$100 for two months, including tuition, lodging, board, and tools, the students will camp at the ruins site. The country is beautifully wooded and cool, at an elevation of 6,500 feet. They will live in tents.



Photograph, Courtesy The Wigwam, Litchfield Park, Arizona

GRAND CANYON

By IRENE WELCH GRISSOM
Whittier, California

I came upon it suddenly,
And I could only feel
Immincy and mystery—
Such splendor was unreal.

Sheer cliffs abruptly fell away,
Cloud shadows in retreat
Raced down to purple depths that lay
A mile beneath my feet.

Vast walls in pink and garnet hues,
With topaz set between,
Were veiled in mists of changing blues
And iridescent green.

The river rushing through its bed
To carve a deeper way,
Was but a distant silver thread
Caught in the net of day.

The buttes that lifted, sharp and bold
Against the azure sky,
Were lofty pinnacles of gold
And temples soaring high.

The little cares that fretted me
Were lost in shining space—
My heart exulted I might see
The light of glory's face.

DESERT FRESHET

By W. HARRISON BREWER
Casper, Wyoming

Gravelly water, running red
Along a little-traveled bed,
Hasten not, nor dare to dream
You'll be a brooklet or a stream.

Clouded remnant of a shower,
Your life is short. Within the hour
You'll be but a crooked line—
Damp pebbles in a new design.

Twilight Reverie

By CHAS. A. SMITH
Phoenix, Arizona

Cood-night old Sol, we've had a glorious day,
And both of us should take a little rest.
So lie down gently o'er the purple hills
That reach from Las Estrellas out to the West.

Now thou art gone—but still o'er desert wide
The twilight of thy golden day I see;
So, when my time shall come to lay me down,
May those I love have mem'ries sweet of me.

And when the curtain of the night shall fall,
When sweet oblivion blots out care and pain;
With faith renewed I'll face the glorious East,
And wait thy coming at the dawn again.

PIONEERS TRIUMPHANT

By LOUISA SPRENGER AMES
Mecca, California

By the high road, and the low road,
And along the winding trail,
They came with high adventure
And a faith that could not fail,
To the Valley of the Sunrise,
To the land of dune and sage,
To write a glorious chapter
On a new and glorious page.
They laced the sand with silver
And hung the rainbow there,
Till achievement crowned adventure
In the beauty that we share.

CREED OF THE DESERT

By JUNE LE MERT PAXTON

A long-tailed lizard with nary a sigh
Lazed in the sun just blinking one eye.
He was tired of hustle, fed up with
scurry;
So he lounged in the sun and forgot
every worry.

GOLD OF CALICO

By CARL C. GOODNER
Barstow, California

Still stand the brave old hills of Calico;
Untroubled now, they dream of other days,
When men who followed on that lure of gold
Made of their rainbow peaks a shafted
maze.
The blast of powder and the ring of steel;
The shout of drivers in the long, dark night;
Of grim-faced men who knew both want and
weal—
A woman's hand to tend a cabin light.

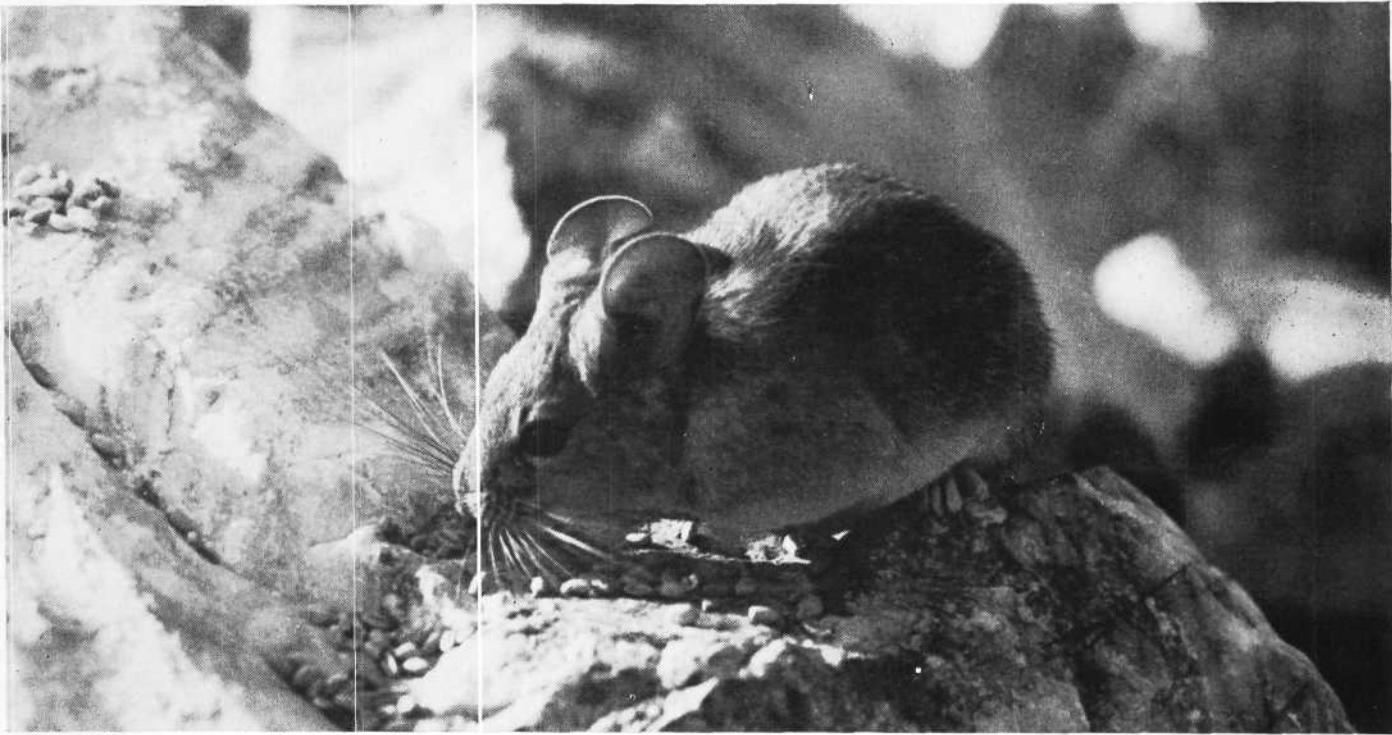
Where are the men who labored here, and
dreamed?
The women for whose love these deeds
were done?
Ever they follow on that golden lure
Until they reach a blest oblivion,
Their lives, the priceless gold of Calico;
Their memory, a treasure rich and fine,
For they who wrought that golden long ago
Passed on to us our heritage of time.

The gold they mined will vanish with the
years,
But not the gold of priceless human worth
That, purged of dross, refined by pain and
tears,
Is richer than all treasure dug from earth.
Theirs but the fleeting bauble of a day,
While ours the deathless meed of their
bequest,
That we might follow where they blazed the
way,
And share with them the glory of the West!

TWILIGHT

By OLIVE McHUGH
Salt Lake City, Utah

This velvet pause is desert twilight,
When earth finds respite from the blare of
day
And we may live alone with loveliness
While beauty crowds the commonplace away.



Photograph by F. V. Sampson

Desert Trader

By GRACE P. NICKERSON

AMONG desert dwellers he is known as pack or trade rat. To the scientists he is Neotoma. Hopi Indians call him *Kee-hua'-cabl'-a*.

But regardless of the name, he is one of the desert's most interesting and intelligent little creatures. The name packrat is not entirely fair—for he is not a true rat W. A. Chalfant says:

"Despite the name commonly given him, the neotoma is said to have no family connection with the house rat (*Mus Rattus*). He will not remain in a habitation when the other species appear, though he makes it his business to drive off other small rodents."

The neotoma is unlike the common rat in appearance. It has a gentle rabbit-like face, large black eyes and bat-like ears. Its soft grey fur resembles that of the Andean chinchilla, which stands high among animal aristocracy because of the beauty of its furry coat.

The neotoma is a rodent. It has two large incisor teeth in each jaw, separated by an empty space from the molar teeth, as has the squirrel, marmot and beaver.

Because of the arrangement of teeth which has given them the ability to cut and carry—and they certainly do cut and carry—the neotoma has been dubbed packrat. Due to its tender skin and small size, it is a mystery to science how these little animals carry the vicious joints of the cholla cactus so often found placed in position to guard their nests.

Many strange stories—both fact and fiction—have been told about the little denizen of the desert commonly known as the packrat. He often invades the camps and cabins of desert dwellers—but he is never a thief. He always lugs in a stick or stone or some other object to replace the one taken away. If he gets the best of the bargain sometimes, it merely is because he has not been educated to civilized standards of value.

According to environment the neotoma differ in their method of nest building, having ever in mind protection from their natural enemies. Those in the desert, or scantily treed region, often select sites beneath large rocks, or among bayonet pointed yucca or cacti.

The nests are made of a strange mixture of materials, yet are well arranged, clean and without odor. Large nests have been found to have several hallways or tunnels connecting a number of compartments, each for a distant use. One compartment for storage of food, one for sleeping and a nest for the young, another for excreta.

The neotoma is attracted to bright shiny objects and sometimes within a nest is found an assortment of pretty buttons, cuff links and even gold nuggets for which he has traded, without the consent of the former owner, a pebble, a stick or some other worthless thing. Occasionally, when on a trading expedition it leaves valuables and takes things of less value. This strange habit of trading has given the neotoma the common name of trade rat.

Like many of the other small denizens of the desert, the packrat is seldom seen except at night. With the twilight hours, it comes forth in quest of food, and where it has access to a camp or cabin may be heard at any hour of the night rummaging in pantry or foodbox.

Smoki Snake Priests are Learning their Chants

FROM the Smoki pueblo in Prescott, Arizona, come the beat of tom-toms, the stomp of moccasined feet, the high weird notes of ancient chants. The Smoki people are preparing for their annual dances.

At sundown on August 4 they will emerge from their kiva in gorgeous costumes—and then the thousands of visitors who go to the mile-high city in northern Arizona will witness one of the most remarkable pageants staged in America.

The Smoki are amazing people. Actually they are a group of 300 white men and women—doctors, mechanics, merchants, lawyers, rich men, poor men—everyday citizens of Prescott. Belonging to an organization whose inner councils are secret, they have dedicated themselves to preserving and perpetuating the ancient chants, dances and rites of the Hopi and Zuni Indians.

This year they will give their 20th annual performance. Their program includes the Snake dance of the Hopi, the Shalako, the Dance of the Birds, the Zuni Weaving dance, and other rituals. They do not use venomous snakes as do the Hopi, but in every other respect the presentation is as true to the native ceremonials as long weeks of careful preparation can make it.

This is no mere burlesque. The Arizonans endeavor to surround their ceremonial with the same atmosphere of reverence as do the native tribesmen. It requires long rigorous training to prepare for these annual performances. Membership in the Smoki tribe is not an obligation to be assumed lightly—and the visitor at the great plaza where the dances are held is awed to silence as this strange drama of the primitives unfolds before him.

It is a drama that remains deep in the consciousness of the spectator long after the last dancer has returned to the kiva and the rattle of gourds and the rhythm of moccasined feet have died away.



*Photographs—
Smoki Snake
priest, and the
plaza where the
Smoki dances
will be held
August 4.*



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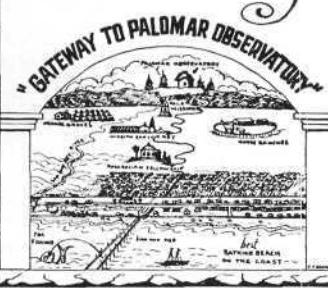


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CHAMBER OF COMMERCE
Oceanside, California.

Says George A. Stingle

Garvey, California

Dear Editor:

Your "True or False" feature of the Desert Magazine is a wonderfully educational set-up for the academic students of desert lore. It must be said that it is one of the best brain testers current. However for us roughnecks with a mentality ranging in the lower brackets something like the following might be in order:

DESERT QUIZ: Here's a chance for you desert brain trusters to win some valuable prizes. If you get all the answers right you may send in \$2.50 and receive a year's subscription to the Desert Magazine. If you get half of them you are entitled to a two-year subscription by sending in \$4. If you don't get any of them right the Desert Magazine, upon the receipt of only \$5, will enter your subscription for three years and will send you FREE OF COST a beautiful binder that looks and feels like a Diamond Back rattler. You can't lose. Neither can we.

- 1—Sonnets come from dry lake beds..... Dark canyons.....
- 2—Uninhabited areas.....
- 3—All desert magazine editors are screwy. Fact..... Contributors nightmare.....
- 4—A sidewinder is a young boy friend punk who drives on the desert highways 80 miles an hour with one hand. Right..... What do you call him.....?
- 5—A Gila monster is a guy who destroys desert road signs. True..... Apologies to the Gila monster.....
- 6—A Mirage is a desert poet's income. Fact..... Fantastic.....
- 7—An Ocotillo is a lizard..... A Mexican flute..... A cactus..... Or just looks like one.....
- 8—Cockroaches are a species of genus homo who tear up desert flowers and shrubbery and throw them out of the car going home. True..... Have you another name for them.....
- 9—A desert trail is a path which begins nowhere and ends at the same place farther on. True..... Crooked.....
- 10—Desert Center is a blot on the face of nature enchanted with snow scenes in August. True..... A Steve Ragsdale pipe dream.....
- 11—Mescal is a plant used to produce a kick..... a binge..... A hangover..... All three.....
- 12—A Rockhound is a Scottie..... A Dane..... A Mutt.....
- 13—Dude Ranch is a Spanish term meaning dud farm. Correct..... Horsefeathers.....
- 14—Many desert service stations have two locations where the highway is and where it was— True..... Pathetic.....
- 15—A desert rat is a mammal..... A vertebrate..... A reprobate..... A marsupial.....
- 16—De Anza established a chain of desert gem shops— True..... A Hilton legend.....
- 17—A burro is a mule..... A donkey..... Nobody's jackass.....
- 18—Mermaids are plentiful in the Salton sea. True..... Fairy tales.....
- 19—The great matrimonial highway crosses the divide at Yuma..... Reno..... Hollywood.....
- 20—(No score on this one) The world's largest planting of date palms is at Palmdale..... Twenty-nine Palms..... Seven Palms.....
- 21—(Triple score on this one) Which one of the following publications excels the Desert Magazine in instructive material, fascinating historical facts and clean journalism. The Desert Magazine..... The Desert Magazine.....

SPECIAL OFFER TO THE PUBLISHER: The return of this manuscript will be accepted by the author provided 10 cents (one dime) is enclosed to cover cost of disappointment, delusions, etc.

GEORGE A. STINGLE.

P. S. If you publish this I would recommend that you let the readers grade their own answers—that'll be a swell break for us lowbrows—and will be a master stroke of diplomacy on your part.

"Forget your enemies, but remember your friends!" This was the formula that enabled George Wiley Paul Hunt to be elected for seven terms as governor of Arizona. Hunt is dead now, but the magic of his success at the polls has become a legend of the desert country. Here is a revealing story of a pioneer who arrived in Arizona on a burro—and lived to establish a national record for re-election to the highest office a state can confer on a citizen.

Seven Time Winner in Arizona

By GEORGE W. P. HUNT

as told to

OREN ARNOLD

IN 1932 George Hunt sought the nomination for his eighth term as governor of Arizona—and lost.

Shortly after the primary election I called at his home on McDowell Road in Phoenix. He had been a seven-time winner for the highest office in his state—and I was interested in learning how he felt about his defeat.

I was greeted by a chuckling fat man in his shirt sleeves. He invited me in to his big lounge room, so crowded with Indian and Siamese relics it resembled a museum. Hunt had once served as ambassador to Siam.

He told me about his pet peacocks, and we discussed the affairs of the world in general. It wasn't a formal interview. He just propped his feet on a window sill and chatted.

The conversation led around to the affairs of state in Arizona. As far as he was concerned the recent primary election was a closed chapter. He offered no alibis—apparently felt no trace of bitterness over his retirement.

"You've served more terms as governor than any other state executive in the United States," I reminded him. "What kind of magic do you use?"

George Hunt died within two years after that conversation, but his vote-

getting power has become legendary, and since the formula by which he maintained his political strength is no less applicable today than it was then, and since it involves some simple truths that apply to all human relations everywhere, I am going to repeat the story as he told it.

* * *

Now that I am about to retire, many persons have asked me to tell the secret of my success at the polls for all these years. They seem to think I can now reveal some tricks that I couldn't tell before. Well, maybe I can. I had to get out some day, and since I am 73 and have made an all-time record for re-election as governor, perhaps I am entitled to do a little boasting.

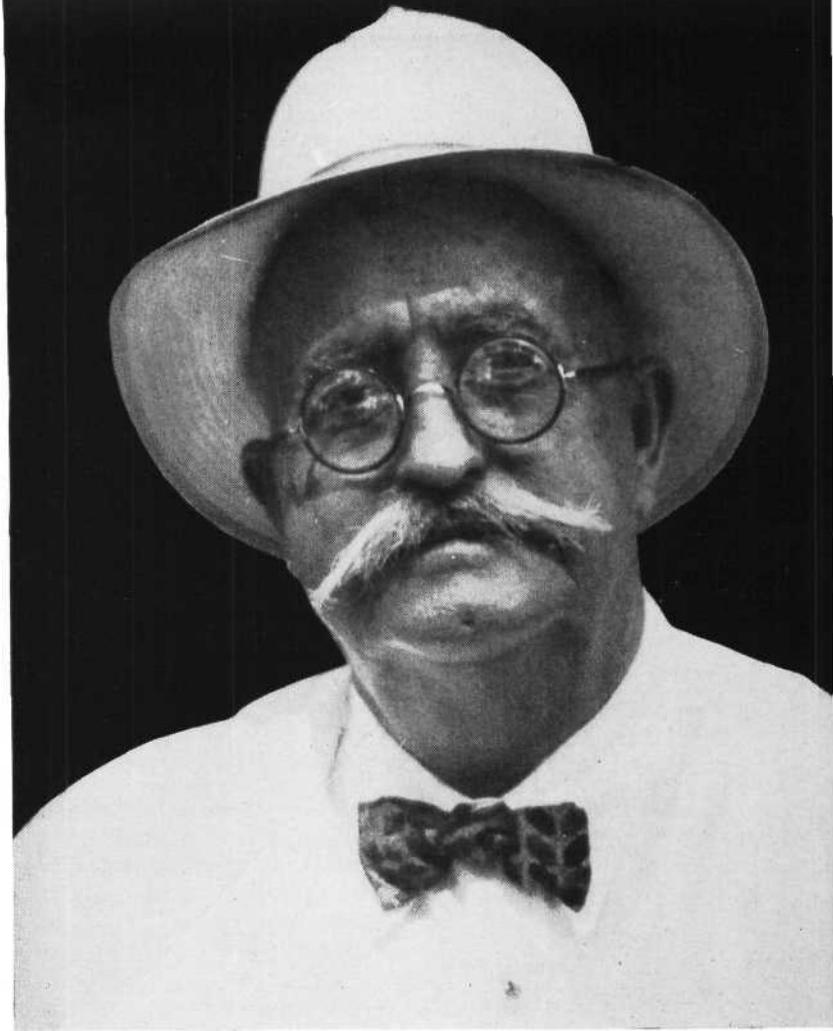
Even before Arizona became a state I enjoyed some success as a campaigner. I was elected to the Territorial legislature seven times, first in 1892 just after I had taken a job as delivery boy for a mercantile store in Globe. Twice I served in the Territorial assembly, nominated once over my protests, nominated and elected again during my absence from the state. The constitutional convention which preceded our admittance to the union elected me as its president, then I became first governor of the state of Arizona, the baby state.

This picture of George Hunt was taken by Oren Arnold in 1932, at the time of the accompanying interview.

I have been governor ever since except three terms. For two of them I was not a candidate, and the third time I got caught in the Hoover landslide. For years people have called me a professional governor, not without some truth. But the pride I take in it is leavened with chuckles. Long ago I learned that laughter and bragadocio could rest only on a basis of humility, and I want to emphasize at this point that I am seriously conscious of the blessings that have been bestowed upon me, that I know pride goeth before a fall, and so I do my boasting only in a spirit of fun.

The newspaper reporters are constantly asking for my "secrets." I tell them that I try to remember my friends and forget my enemies. And if I must specify one formula, that's it. Forget your enemies, and remember your friends.

Dr. Frank Lockwood, dean of the college of arts and letters at the University of Arizona, has written that I sometimes lived up to my motto too faithfully. Some of my friends I have carried too far, he says, and some of my enemies ought to have been crushed. I suspect he is right. Dr. Lockwood is a great scholar, a keen observer, and I who have had but little schooling along many lines am bound to respect him. I lacked the good judgment



to know exactly when to ignore my motto, but in general it has been a good one for me—forget my enemies, remember my friends.

My own development of the motto I adopted gave rise to what my Republican constituents and opponents refer to as the Hunt machine. More often than not the term was used with a note of derision, even of contempt. This sometimes irks me, and I am wont to shout back that I admit its existence and that by gum she shore did run smoothly!

As a matter of fact, I do admit its existence. And I think it is no misstatement to say it ran smoothly.

The Hunt machine in Arizona was a legitimate one, and under our American political system it was an inevitable one. Every successful candidate has one. Mine has just given more mileage than a governor expects!

I don't mind telling you exactly how the machine was made and operated. My enemies are in the habit of assigning a lot of impossible diabolical parts to it, but that usually becomes funny. The Hunt machine was made almost exclusively of Good Turns, of Kindnesses, of Personal Favors, of Friendship, however idealistic this may sound. It was based on my motto, "Forget my enemies, remember my friends."

Arrived on a Donkey

Exactly half a century ago I rode into Arizona astride a donkey. We call 'em burros. And this picture is an oft painted one. But the point is that I had an humble start in life. Even if I never split rails, I knew enough of hardships to have a sincere sympathy for the honest man who was down and out.

I worked at various jobs at first, was a restaurant waiter for some years, a prospector, a dishwasher, then a delivery boy for the Old Dominion Mercantile company in Globe. This last position I stuck to and in nine years I was president of the firm, moving up step by step.

Globe is a mining town, and while I was clerk and manager and the president of the Old Dominion, I grubstaked many a penniless prospector. I do not brag about it, I just admit it. Plenty of other successful men have done the same thing.

I found through this helping of my fellows that I had released a great flow of something which we call appreciation. Almost invariably those men to whom I gave an outfit of clothing, a sack of grub, a pick and shovel and some tobacco, either came back later to pay or in later life "got even" with me.

If I forgot all about being the so-called world's record governor, this one

fact, this evidence of the goodness of men, would be a mountain of comfort and pleasure to me.

Some of those old-timers were still voting for me, still electioneering for me whenever I ran for office, after nearly 50 years.

There are a number of other instances, some of which have become common stories about the state for I see them crop out every now and then in print or in conversation. I will relate two or three, just as examples of remembering my friends.

One of my main campaign promises always has been to develop the educational standing of Arizona, to give every girl and lad a chance to go to school, good school. I have been rewarded in this stand, for my state now is third in national ranking for its educational standards, has even been first. Well, one summer some years ago a boy was working in Phoenix for the United States reclamation service and he wanted to go to college. When September came he lamented that, with all his careful saving, he did not have enough to leave for school. Somebody told him to go to the governor, and he came to me.

I talked to him a bit and liked him, so I told him to go on down to Tucson and enter the University, and that a job would be provided for him. I asked a friend there to find the boy a job, and it was done. The lad became, automatically, an enthusiastic unit in the Hunt machine. I am proud that he was.

Some years ago a local telegraph operator whom I knew, faced great trouble. A strike of telegraphers had cost him his job, and just then his wife was killed in an automobile wreck. He had not even money enough to bury her. I heard it through another acquaintance, so I sent him my check for \$25. or more. But I am told that he became one of my most ardent political supporters, an active, appreciative member of my machine. I hadn't been consciously building political fences at all!

Another Cog in the Machine

Then there was a man who got in trouble over paying alimony to his divorced wife. He was brought before the court for non-payment, and he didn't have the money. He was in a tight jam, but I had reason to believe he meant well and was honest. I loaned him the money and went on his bond. Then he became a cog in my political machine.

Each of these little episodes, mind you, made more than just one friend for me. Those fellows—those humble prospectors whom I helped at Globe, the college boy, the telegrapher, the man in court, and the others—they all naturally went to talking, and with every conversation they won more political converts for me. I

didn't discover how such a "machine" could evolve and develop into a strong political power, until long after I was in the governor's chair. I had made myself popular unknowingly just by helping my friends as any of them would have helped me if I had needed it. And that is the secret of the Hunt machine, notwithstanding the political mud that has been thrown at it, the sinister accusations that have been heard, in the past decade.

Furthermore I believe it is the *only* form of political machine that is worth a hoot. I know—yes, I know—that the term "machine" implies something different. My energetic opponents and their henchmen from time to time have said that my machine was an autocracy. They say that I squeezed the dollars out of every state employe in order to swell my campaign fund, that I swapped jobs for votes, and so on *ad nauseum*. But, as usual, these opponents are more enthusiastic than accurate.

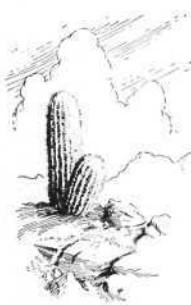
Jobs for Friends

In some measure I did, of course, put my friends in the appointive offices. All elected men do. And rightfully so. Not as a matter of worshipping the spoils system, but because if the varied wheels of government are to run smoothly, a spirit of co-operation must exist, the gears must mesh easily and not clash, and such a spirit can best be fostered by men and women who already hold a mutual friendship. We knew how each other would react to any given problem because we already were acquainted.

In the stress of office work we could depend on each other, not to fill each other's pocketbooks but to pull together for what we had determined was the best governmental policy. It is much like a football team or any other athletic team; a group of players who have a mutual liking for each other, who know each other's weaknesses and strong points, who have played and entered competition together, naturally develop an invaluable team play which brings success. But one or two strangers introduced into the organization might disrupt the entire team and cut its efficiency in half.

And that is about all the "confession" I can make. I wish I could shake hands with all the people who were wheels in the Hunt machine. Many of them scattered in many western states now (I have almost as many in California as in Arizona) have written me their sympathy over my recent defeat. That's fine, but my defeat was an honorable one, and I congratulated the man who beat me, so I am not down at heart.

Maynard Dixon



"Hard-boiled sentimentalist" is the way one of Maynard Dixon's contemporaries in the field of art described him. But the words were used in admiration—not in reproach. Dixon is recognized today as one of the West's outstanding artists—and if you are interested in knowing how he got that way, here is the story.



He Wanted to do Honest Painting

By JOHN W. HILTON

As an art student Maynard Dixon was everything that an art student should not be. He admits that he spent most of the three months of his enrollment ditching classes so he could go out and sketch in the open.

The idea of spending long hours drawing plaster heads and pottery bowls just did not appeal to him. He wanted to be doing something vital and worthwhile.

Having been a great admirer of the popular Remington, Maynard Dixon at the age of 16 sent his sketch book of western drawings to the master for inspection. Remington's comment was so encouraging that Maynard determined then and there to make art work his career.

It was following this decision that he enrolled in school. Three months there convinced him that if he was ever to become an artist, he must learn how to paint by his own methods.

But he continued to study according to his own program, and at the age of 20 got his first job as a commercial artist on the old San Francisco Call. That was in 1895, and from that day to this he has earned his living entirely with his brush.

He did some free lance work for Jack London, and his work attracted the attention of Chas. F. Lummis, editor of the magazine "The Land of Sunshine."

Lummis' tales of the great desert region in Arizona and New Mexico fascinated the young artist, but it was not until 1900 that he had saved enough money to take Lummis' advice and go out into the desert to explore and paint.

His first stop was at old Fort Mojave near Needles. Many of the Indians wore little more than a G-string and a gob of mud in their hair. But Dixon's sketches were so realistic that many years later an old tribesman visited his studio and called many of the subjects by name.

At Prescott Dixon became acquainted with Sharlot Hall whose poetry already had gained national recognition.

At Tempe he found just the subjects he wanted for some Mexican sketches. But the rumor had gone around the Mexican colony that he was a government agent and was making the pictures for purposes of identification.

It took some time to overcome this obstacle, but he eventually won the confidence of the Mexicans, and completed some of his best early canvases here.

At Isleta in New Mexico he joined Lummis and together they explored the Pueblo Indian country — one of them writing and the other sketching as they went. Through Lummis he made many contacts which were of great value to him in years to come.

But Americans at that period were not greatly interested in the arts and crafts and the Indian life of New Mexico. And Dixon soon drifted on to New York to take up the grind of commercial art. In the east he was asked to draw the west, not as he knew it, but as it was visualized by easterners who had never been out of the metropolis.

"Many of these illustrations," says Dixon today, "were overdrawn lies. But in New York the absurd bootlicking phrase 'the customer is always right,' was the first commandment."

Doing serious work on the side, Dixon gained recognition among the real artists of the east, and in 1911 his paintings were hung in the New York Academy. He remained on his job as illustrator for five years, and then rebelled.

He wrote a friend that he was tired telling lies about this land he knew and cared for, and he was coming back West where he could do honest work.

He opened a studio in San Francisco and one of his first customers was Anita Baldwin. She purchased two of his easel pictures, and then commissioned him to do some murals—"as you want to paint them." This was the realization of every artist's dream. And this was the beginning of his real career in art.

Dixon's paintings appeared more fre-

quently in the leading western galleries and by 1920 he had attained a prestige which gave him complete freedom to do the kind of painting he liked. More of his time was spent in the desert, on the range, in mining camps, and among the Indians. He likes the rugged outdoor life and gets his finest inspiration from association with the desert wilderness, and with the hardy people of all colors to be found in the remote regions of the west. He is not a hot-house painter in any sense of the word. He likes the real people of the outdoor west—and they like him.

His gruff and blunt manner of conversation never fails to leave a lasting impression — it is recognized as coming from a man who is genuine, both in what he says and in his art.

Many of his canvases have an almost startling sense of space. His west is big and wide and free. His work has been shown in nearly every important gallery in the country. His list of awards covers three typewritten pages, but he is not much impressed by that. "The present jury system of judging art work," he says, "has little to do with the merit of the work." His criterion for a successful painting is, "Does it please the artist?"

Today at 65 Dixon is still teaching himself how to paint. His studies, which really began when he ditched his art school course, are carried on in constant quest for new effects and new ideas. Instead of slipping into the rut which often comes with success at this period in life, he is experimenting with more daring material than the average young artist would dare attempt.

His San Francisco studio has been closed. With his wife, who also paints, he travels the Southwest in a station wagon — and his permanent address has become the desert that to him is a place of beauty and freedom.

DESERT QUIZ ANSWERS

Questions are on page 18

- 1—On the sand dunes after dark.
- 2—Arizona.
- 3—Species of wild hog found in southern Arizona.
- 4—Supply irrigation water for the Colorado river Indian reservation.
- 5—Lilies.
- 6—Bradshaw.
- 7—Teddy Roosevelt.
- 8—Washingtonia palm.
- 9—Lumber industry.
- 10—Aid in the conquest of California.
- 11—Navajo.
- 12—Bennett-Arcane party.
- 13—Polaris.
- 14—Cereus.
- 15—Silver at Tombstone.
- 16—Quartz.
- 17—Shape of the bean.
- 18—Lechugilla desert.
- 19—Bolton.
- 20—Southern Nevada.

Sez

Hard Rock Shorty of Death Valley . . .

By LON GARRISON



"Pisgah Bill is the dangdest feller," began Hard Rock Shorty. "Always runnin' into the goldurndest things an' gettin' hurt the most peculiar ways! He's over in the hospital now an' how he got there is somethin' to hear."

Hard Rock waited for his audience to settle down before he went on.

"He was out prospectin' in the Panamints last week an' I went up to visit 'im. He'd a little camp up there an' it was hotter'n Mexican chili beans. The sun just boiled down. Got so hot the sand started meltin' an' I told Bill he'd better stay home in the shade but he wants to go look at some rock he thinks has mercury or somethin' in it, so out he goes. Purty soon I hears 'im shootin' at somethin' an' hollerin' an' then he don't come back. I go out after 'im an' find he's run head on into a big rock an' knocked 'imself stiffer'n a 40-foot plank.

"I get 'im back to camp an' when he comes to he begins hollerin'!"

"'Git out o' my way, yuh ornery lookin' galoot! I'll git yuh! Where's

my gun? Hard Rock, there's pirates in these here mountains! I just seen the meanest lookin' guy I ever saw no place!"

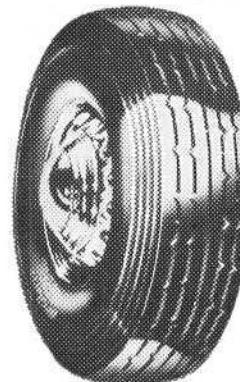
"He goes on like that for hours, so after it cools down a bit I go out to look it over an' try to figger out what happened. They wasn't but one set o' tracks—all Bill's. Yes sir—here he walked along—here he stopped — here he seen somethin'. I looks ahead. All I can see is the same rock Bill run into. I go look it over, an' by golly, I finally get it figgered out.

"That rock is the one Bill thunk had mercury in 'er. The sun was so hot she roasted some o' the mercury out. At the same time some o' the melted sand run down over the face o' the rock. Yes sir—the mercury stuck to the back o' that glass makin' a big mirror. Imagine Bill's surprise when he walks around the corner an' meets himself unexpected! Yes sir. Bill was shootin' at himself an' after he busted the mirror an' tother guy disappeared Bill started chasin' himself, an' that's how come he's in the hospital."

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Coyote and the Bluejays.



A Hopi Legend

As told to HARRY C. JAMES

Illustration by W. Mootzka, Hopi Artist

ONCE toward Oraibi butte there lived in the old days a coyote and his wife. They had six children. The coyote children were so hungry they kept their mother and father busy all the time getting food for them. One day the mother coyote found some food that really belonged to the bluejays. Being tired and hungry herself, she took the food and brought her family a fine supper. The bluejays were very angry with the coyote and determined to teach her a lesson.

A few days later the coyote was out looking for food again. She circled all around the Oraibi mesa without success. Then she climbed on top of the mesa and started hunting for rabbits among the piñon and juniper trees. When she got high on the mesa back of the village, she came upon a number of bluejays having a dance far up on the limb of a big dead piñon tree. The bluejays looked fine and plump. It made the coyote's mouth water just to look at them. "My, what fine meals those birds would make!" the coyote said to herself. She did not know that they were the bluejays from whom she had stolen the food only a few days before.

"Come on up and dance with us," one of the bluejays called down to the coyote.

"I would like to, but I can't climb trees," she replied.

"That's all right! We will help you," said the jays.

Then the birds began taking out their feathers and wings and tails and they dropped them down to the coyote. Soon there were enough feathers to make wings and a big feather tail for her. The bluejays, though, were wise enough to keep some feathers so they could still fly. The coyote flapped her new wings and ruffled the feathers of her new tail. After trying a few times she found that she could fly.

"Now come up and dance with us!" the jays cried.

The coyote flew up on the branch and joined the bluejays, thinking that she would have a dance with them and play with them before she gobbled them up. They danced together on the piñon limb. As the dance finished, the coyote made a jump for the closest bluejay, but they had been expecting this and the bird jumped aside quickly. Immediately the jays flew up from the limb and circled high above the tree. The coyote, proud of her new wings, flew after them. The bluejays kept dodging around her as they gradually circled higher and higher. The coyote felt sure she could catch them and they teased

her by flying just out of reach of her snapping jaws. Whenever she was just ready to snap at one of them, the bluejays would dart below or above her just out of reach.

When they had tormented the bad coyote for several minutes and when they were flying right over a pile of rocks, the jays suddenly turned on the coyote and began pulling out the feathers they had given her. As the birds plucked out a feather they put it back in their own bodies. Soon they had taken back so many of the feathers that the coyote could fly no more and she fell heavily on the sharp rocks below.

That is how the bluejays punished the mother coyote for stealing.

KENNETH KREIGH

CREATIVE DESIGNER AND BUILDER

- PATIOS
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I have designed and built the largest Barbecue and Fireplace layout in Santa Barbara County . . . Botanical Garden and rock entrance to Ramona Pageant Bowl . . . Rock Masterpiece (San Jacinto Museum) front . . . 1000 ton Indian rock garden at Soboba Hot Springs . . . and colorful new rock garden at entrance to Desert Magazine.

FREE ESTIMATES BY MAIL. Sketches and plans reasonable. Write Kenneth Kreigh (Cree), Pioneer Hotel, San Jacinto, California.

While the flowering season has long since passed on the desert lowlands, many of the species are still in blossom on the higher levels — among them the aster which somewhat resembles its cousin, the domestic aster. Here Mary Beal describes some of the members of the wild aster family, and tells where they may be found.

Hill Climbers of the Desert

By MARY BEAL

THE domestic aster that grows in your garden is a pretty flower—but its civilized surroundings have given it no more beauty of color and form than its wild little cousin who lives a carefree life on the rocky hillsides of the desert.

No sheltered prima donna is the Mojave aster—but a rugged little hill-climber which chooses for its habitat the boulder-strewn bajadas, precipitous slopes and high mesas between the 2000 and 6000-foot elevations.

Each sturdy perennial plant sends up a number of stems a foot or two high, each ending in a single flower-head with lavender or violet-purple rays surrounding a bright golden center. Rather sparse and hairy is the grey-green foliage, a good background for the exquisite coloring of the blossoms. If you know the large single aster of various hues now popular in cultivation, you'll recognize the kinship of this wild member of the family when you find it on rocky slopes in the deserts of California, Arizona, Nevada and Utah. Its time of blooming depends on the elevation and season. If spring comes early you may find it in March, but in normal seasons not until April, or climbing the mountains in May. If the season is late the asters may be seen in the higher elevations well into June.

I hope you'll come upon some of its favorite haunts in California's Mojave desert. I have found them especially plentiful on the slopes of Ord mountain south of Daggett and the Providence mountains in the eastern Mojave and out on the Barstow-Cave Springs-Death Valley road. If you see even one of these memorable displays you'll know that aster time is one of the delights of the desert spring to look forward to from year to year.

The other states also have their asters and below you'll find the commoner species of the tribe and their range:

Aster *tortifolius*

(Listed as *Aster abatus* by some botanists)

A God-child to be proud of is the Mojave aster. It is a bushy perennial one to two feet high, the main structure woody and shortly branched, dead-looking until spring brings forth from these grey old sticks several or many sparsely-leafy stems surmounted by long-stemmed flower-heads. The grey-green herbage is covered with white-woolly hairs, its softness offset by the spine-tipped teeth of the narrow leaves. The lovely flowers are two inches or more across, the numerous clear lavender or violet-purple rays centered by a golden disk.

Many foothills and mountain slopes of the Mojave desert are ornamented by these attractive flowers, which are also



Mojave aster (*Aster tortifolius*)

found in the northern Colorado desert, Inyo county desert areas, Nevada and Utah.

Aster *cognatus*

The northern Colorado desert displays this beautiful species, the Mecca aster, with flowers similar to the Mojave aster, the rays somewhat broader. The plant itself is quite different, more herbaceous and spreading widely. The shiny white stems are leafy up to the heads with ovate or elliptic rather dark blue-green glistening leaves, the margins spiny-toothed, sparsely dotted with minute white glandular hairs. The flowers measure about two inches across, the disk bright yellow and the rays light violet or bluish, the involucral bracts with conspicuously long, tapering tips.

Painted canyon is adorned by especially fine plants, occupying low benches at the base of the walls, and other canyons around Mecca also take front rank with their aster output.

Aster *orcuttii*

A rarer, very lovely species, much like the Mecca aster is found in the southern Colorado desert. Its white stems are leafy up to an inch or two of the flower-heads, the herbage not at all hairy and the leaves somewhat spiny-toothed. The beautiful lavender or purple flowers are often two and a half inches across, the largest of all desert asters, truly prize-winners.

Aster *canescens*

Not a shrub the Piñon aster, but a herbaceous biennial or perennial with one to several grey-green leafy stems from the base, often branching, six inches to over two feet high. The herbage is somewhat hairy and the flower panicle glandular. The violet or blue-purple flowers, with few rays or none, are less than an inch across, the bracts noticeably green-tipped. Found in ranges of the eastern Mojave desert and Arizona, in the Piñon belt above 5000 feet. The variety *tephrodes* is quite hairy, has larger flowers with the green tips of the bracts very long and tapering. It grows at lower elevations from the southern Colorado desert to Nevada and Arizona.

Aster *spinulosus*

Here is a different type of aster, with characteristics that have earned the name Mexican devilweed. This black sheep of the tribe sends up a slender stem with reedy branches, from

three to over nine feet high, very stingy with foliage, the upper leaves mere scales, bearing at the axils evil spines, the few lower leaves light-green and linear. The white-rayed flowers are small, turning an ugly brown, blooming in the fall. It chooses lower elevations in the Colorado desert, a torment to Imperial valley ranchers, working it way through the Palo Verde valley to Needles, on to Utah and as far east as Texas.

Leucelene ericoides

(*Aster leucelene* of some botanists)

A charming little perennial usually only three or four inches high, never more than seven. Many leafy wiry stems crowd on the rough, woody, branching base, each stem ending in a single flower-head a half inch or more broad, the narrow rays white or pinkish, the small disk dull yellow or reddish-tinged. Appressed hairs cloths the herbage and the very narrow leaves also wear a fringe of stiff hairs.

This baby aster favors the higher ranges of the eastern Mojave desert, Nevada, Arizona, Utah and on to Texas.

NEW ACCOMMODATIONS AT BANDELIER MONUMENT

A new hotel development is available this year in Bandelier national monument, New Mexico, near Santa Fe. A rambling, adobe structure, it is set at the foot of towering cliffs which contain caves and dwellings of Indians of six and seven centuries ago. Of the several gorges in the monument, the service has made accessible to motor travelers the most northerly — the beautiful, heavily forested Frijoles canyon — while other canyons including many interesting ruins may be reached by hikes and horseback rides.

According to the national park service improved roads and accommodations will be available this summer at many of the federal and state recreational areas.

A 30,000-gallon reservoir is to be installed at the Arches national monument to supply adequate water for tourists and federal works.

Progress is being made on the million dollar beach development at Hemenway wash on the shores of Lake Mead. The plans include an air-cooled lodge with coffee shop and dining room and housing for 150 guests, and a harbor with moorings for a large fleet of motor and sailboats.

THE DESERT TRADING POST

Classified advertising in this section costs five cents a word, \$1.00 minimum per issue—actually about 2½ cents per thousand readers.

POINTS OF INTEREST

LIVING ON THE DESERT stimulates new life interest therefore choose a good Desert Village, Cathedral City, California. See W. R. Hillery.

NOVELTIES

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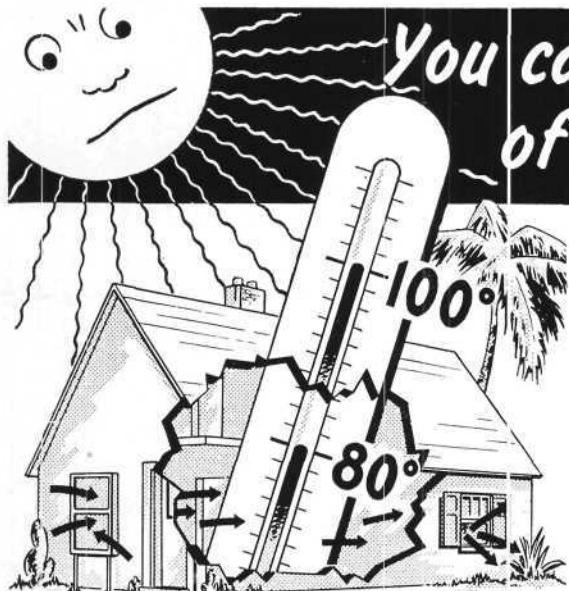
KARAKULS producers of Persian Lamb fur are easy to raise and adapted to the desert which is their native home. For further information write Addis Kelly, 4637 E. 52 Place, Maywood, California.

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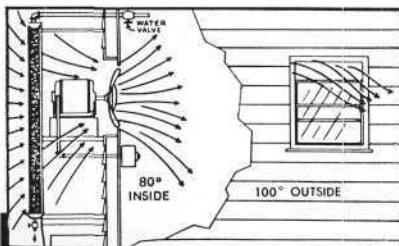
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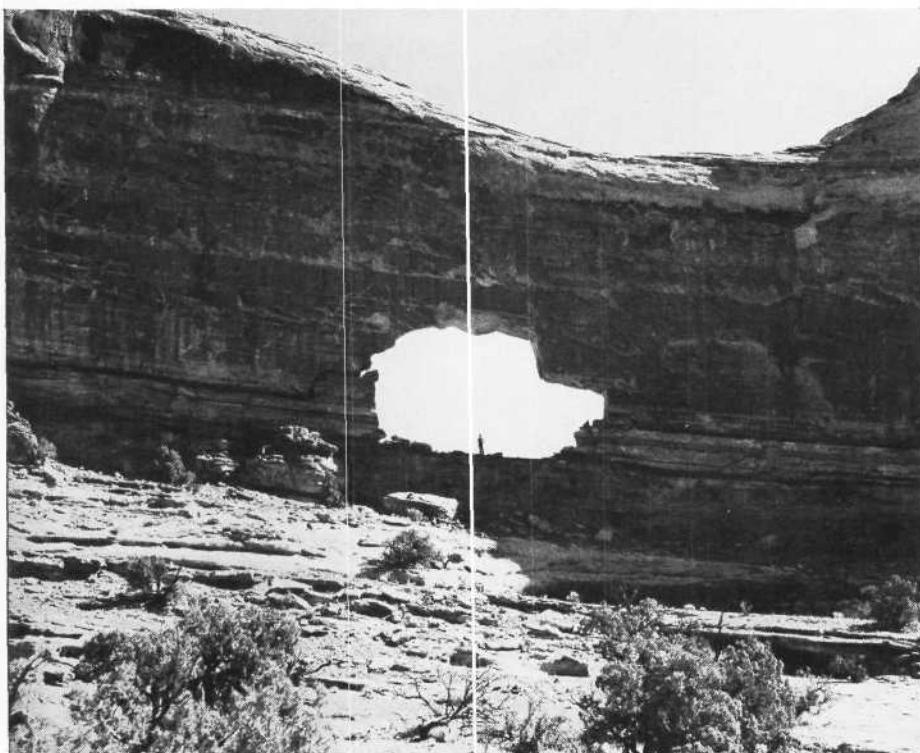


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Echo Arch

Marguerite Schmidt of Moab, Utah, is the winner of the \$5.00 award offered by the Desert Magazine in May for the correct name and the best descriptive article about the landmark shown in the accompanying photograph. Her winning story is published on this page.



By MARGUERITE SCHMIDT

THE landmark pictured in the May number of the Desert Magazine is one of hundreds of arches, or "windows," or "bridges," carved in sandstone by the elements wind and sand, and not by water, and found in southeastern Utah. It is known as Echo Arch and is located in the Colorado river canyon, about 10 miles downstream from the bridge crossing the Colorado river on U. S. Highway No. 160, near the town of Moab, Utah.

According to the writer's knowledge no actual measurements have ever been taken of the arch. It is estimated to be about 30 feet from the floor of the arch to the ceiling and the width, at the widest point, is estimated to be 62 feet. Local authorities differ as to the type of sandstone in which the arch is formed; some maintain the sheer cliff is composed of Wingate sandstone, while others say it is Entrada.

Although many fishermen and hunters intent upon their particular sport, cowboys searching for lost cattle in the canyon and perhaps a dozen students interested in geology or exploration of the great river canyon, have viewed and admired the massive structure and scenic grandeur surrounding Echo Arch, the

tourist who frequents the highways but not the byways will not soon experience the thrill of visiting this beautiful arch and hearing his voice or other sound reverberate down the high-walled canyon. Ordinary conversation, in or near the arch, can be heard to echo and re-echo many times.

Echo Arch is accessible by boat or trail, going down stream from the Colorado river bridge, on U. S. Highway No. 160. If the trip is made by boat, the sight-seer may become so engrossed with the sheerness of the canyon walls and ever-changing panorama of scenery, the arch may be missed entirely, unless the party knows the location or is guided by some one familiar with the river. The most magnificent view of the arch can be had by walking less than a quarter of a mile from the river bank to the base of the arch and by climbing into the huge opening, taking in a view of the Colorado river on one side and an expanse of rugged, broken plateaus and gorges on the other.

The trail on the right bank, on which the arch is found, is rough and partly obliterated in spots, but the trail down the left bank of the river is fairly well traveled and easy to follow. However, a

crossing near the arch would be quite hazardous except by boat.

The nearest railroad stop, on the Denver and Rio Grande, is at Thompson, Utah, a distance of 32 miles from the Colorado river bridge.

Located in the same general area is Arches national monument, easily accessible by automobile, within the boundaries of which are found numerous arches, natural bridges and many other superb examples of wind erosion.

PLAN TO STOP AT . . .

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"ON THE DESERT'S EDGE"

Somewhere in the Mojave

Who can identify this picture?



Landmark Contest for July

No, this isn't the Painted Desert. But it is a very colorful spot nevertheless. It is in one of the well known California desert regions. During the winter season many hundreds of motorists park their cars behind the parapet shown in this photograph and exclaim in wonder at the rugged beauty of this landscape.

In order that Desert Magazine readers may become better acquainted with this region and the roads leading to it, a cash prize of \$5.00 will be paid for the most

informative manuscript written about this place.

Entries should not exceed 500 words in length, and should identify the place by name, give full directions for reaching it, and any added information which might interest the traveler.

The contest closes at 6:00 p. m. July 20, and the prize-winning entry will be published in the September number of the Desert Magazine.

Weather

FROM PHOENIX BUREAU

Temperatures—	Degrees
Mean for month	81.5
Normal for May	75.0
High on May 14	104.0
Low on May 1	59.0
Rain—	Inches
Total for month	0.01
Normal for May	0.12
Weather—	
Days clear	21
Days partly cloudy	6
Days cloudy	4

J. M. LANNING, Meteorologist.

FROM YUMA BUREAU

Temperatures—	Degrees
Mean for month	81.7
Normal for May	76.2
High on May 14	105.0
Low on May 6	53.0
Fair—	Inches
Total for month	0.00
71-year average for May	0.04
Weather—	
Days clear	29
Days partly cloudy	2
Days cloudy	0
Sunshine	97 percent (418 hours of sunshine out of possible 430)
Colorado river—	
May discharge	at Grand Canyon 2,001,000 acre feet. Release from Boulder dam 570,000 acre feet. Estimated storage May 31 behind Boulder dam 23,400,000 acre feet.

JAMES H. GORDON, Meteorologist.

THE SPIRIT OF



by JOHN CLINTON



I just saw a movie that you ought to see. The trouble is, I don't know how you're going to see it. Some of our engineers made it a while back, and it's a dilly.

* * *

It shows what happened to two motors which started out in life without any carbon in their cylinders. They were each driven 6000 miles over the same roads. At the end of that time, the engineers took the lids off the motors, and what do you think they found?

* * *

Nope, not Scarlett O'Hara. But in the motor that had been driven with one kind of oil there was a lot of carbon. Enough to make the motor ping on the least excuse.

* * *

However, in the other motor—the one that had been driven with Triton Motor Oil, on my word of honor, there wasn't enough to make the least practical difference. What little there was, was so soft you could scratch it with your finger nail!

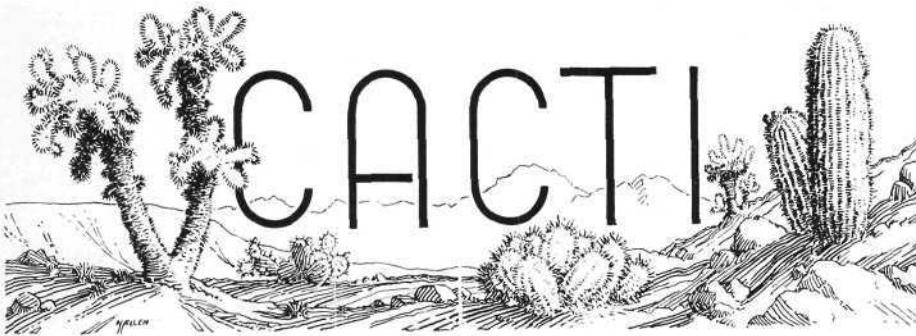
* * *

Triton forms very little carbon itself. The movie showed that. And because it forms so little, it will allow your motor to burn up most of the old carbon formed by other oils and blow it out the exhaust pipe! In others words... Triton changes Ping to Purr!

* * *

And just in case you're a skeptic and you don't believe me, or the movie I saw, you have your crankcase filled with Triton Motor Oil this very day. Then drive 2 to 3 thousand miles, and see for yourself. You'll never use anything else, I can promise you.

UNION OIL COMPANY



This page belongs to the growing fraternity of cactus and succulent collectors. Hobbyists in this fascinating field are invited to send their notes and suggestions to the Desert Magazine.

LUCILE HARRIS, Editor.

Lemaireocereus Thurberi . . .

BY ROY MILLER

The second largest cactus in the United States, a species important enough to have its habitat established as a national monument, a plant whose fruit is an important item of food for the Papago Indians—this is *Lemaireocereus thurberi*, the Organ Pipe cactus.

This species is confined mainly to a vast area of 330,690 acres extending south from Ajo, Arizona, to the Mexican border, which was established as the Organ Pipe Cactus national monument by presidential proclamation on April 13, 1937. This enormous area is, however, but a small portion of the actual range of this species. It extends several hundred miles down into Mexico, and is found throughout much of the peninsula of Lower California.

In Mexico, *thurberi* is one among many species of giant cacti, but in the United States it is exceeded in size and bulk only by the Arizona giant or saguaro (*Carnegiea gigantea*), which it slightly resembles. These two giants of our desert are easily distinguished, even by the beginner, as the saguaros have a single tall trunk, with shorter arms branching off several feet from the ground, while *Lemaireocereus thurberi* always branches at the base, sending up 5 to 20 or more slender arms. These arms, which sometimes reach a height of 20 to 25 feet with diameter 4 to 7 inches, are divided into several ribs with short, dark, uneven spines down the edges. They somewhat resemble the pipes of an organ, thus giving this plant its common name.

The flowers are rather inconspicuous for a plant of this size. They appear in the spring along the upper two or three feet of the arms—a small, funnel shaped flower, greenish purple in color, never opening very wide. They are soon followed by the attractive fruit which is globular, $1\frac{1}{2}$ to 3 inches in diameter, and which ripens into a red or scarlet color, covered with shining black spines.

Some of the earliest records of this plant tell how the fruit is harvested by the Indians. Using a long pole with a bone hook fastened to the end, they pull the fruit off and catch it in a small net, so it does not touch the ground. The spines are then brushed off with a stick and the fruit peeled and eaten, or taken home to be dried or otherwise preserved for later use. The fruit is very juicy and has a fine flavor and high sugar content. The seeds are

so tiny they can be eaten with the fruit without annoyance. In a land where food was always a problem, the harvest of this fine fruit—pitahayas, as they were called by the early Spanish explorers—must have been a most welcome change for the Indians from their usual meager diet of ground seeds and grain.

In cultivation *Lemaireocereus thurberi* is rather slow growing and does not flower freely, but otherwise is not difficult to handle if protected from frost. Collecting this plant is forbidden by the state of Arizona, but cuttings obtained from dealers may readily be rooted. Allow time for the cutting to dry thoroughly, until it has formed a callous, then place in sand until roots are formed, after which it will grow in any well drained soil.

The trip to the Organ Pipe Cactus national monument is full of interest and is well worth while for any cactus fan. A good desert road leads from Ajo to the Mexican border town



Organ Pipe Cactus. National Park Service photo.

of Sonoita, and on into Mexico. Thurberi is found here in dense colonies along with saguaros and several species of Mammillarias. Opuntias of the cylindric type grow to be huge trees. Ocotillo, yucca, ironwood and many other desert plants are also found. This trip is not favored in the summer months as this is one of the hottest places on the desert, but from October to April the weather is ideal. As this monument is less than three years old, no facilities are provided, so take plenty of gas, oil, and water—especially water.

What the Cactus Clan is doing in . . .

Oklahoma City, Oklahoma . . .

Lithops will be the subject of an outdoor meeting of the Cactus and Succulent society when they meet July 18 in the garden of Mrs. Jesse Vandenburg. Tommy Graham, chairman.

Des Moines, Iowa . . .

Mrs. Edna Knode and Mrs. Esther Williams will speak on the Euphorbiaceae and Asclepiadaceae at the July 25 meeting in the home of Mrs. H. A. Campbell. Species from these two families will be exhibited, and cultural and other questions will be answered.

Cleveland, Ohio . . .

Affiliated with both the national society and Garden Center of Greater Cleveland, cactus society members here are an active unit. Leading club activities are Dr. James F. Machwart, president; Joseph C. Trapp, vice-president; Mrs. Ann Voss, second vice-president, and Mrs. Flora N. Trapp, secretary-treasurer.

Seattle, Washington . . .

Officers recently elected for the 1940-1941 term are Mrs. John Oakley, president; Mrs. A. J. Cotton, vice-president; Mrs. R. R. Nichols, secretary-treasurer. Bert Williams and Mrs. V. W. Zatarain are board members.

Wisconsin Has Cactophiles

Thirty members and associate members make up the Cactus and Succulent society of Milwaukee. The club draws its membership not only from Milwaukee but from half a dozen surrounding towns.

GLAZED POTS OR POROUS POTS

Many growers warn the novice to avoid glazed or painted pots for cactus plants. Others contend that under proper conditions the glazed pot has several advantages over the generally accepted porous type.

Besides being more attractive in appearance, the glazed containers maintain a more even temperature and need less watering in warm weather. To take advantage of these features drainage must be given greater attention than in ordinary potting.

First, the size of the pot should just exceed the diameter of the plant including its spines. Depth should be governed by the plant. Some species of Coryphantha and Echinocactus have long roots, and many like Mammillaria and Echinocereus have short ones. Then, a fourth to a third of the pot should be filled with broken pottery, coarse stones and a layer of charcoal or peat moss. Top with moderately rich loam and sand. Variations, including commercial fertilizers, should be made according to the species.

BIG GROUP OF LITTLE PLANTS . . .

The little Mammillarias have expanded and contracted by turn since Haworth first established the genus in 1812. Its hundreds of species are now distributed among several genera but there are still some 200 species remaining in the original group. This breaking up of the old "lump" classification is largely the work of Britton and Rose.

Not only are the Mammillarias small and therefore easily added to a collection, but they respond well to cultivation. Most of them like a sunny location and moderately rich soil.

Their appearance is also much in their favor. Although the bell-shaped flowers are small, they are delicately colored and are shortly followed by brilliant red (sometimes green), smooth fruits.

The distinguishing feature of the genus, and the one from which the name is derived, are the tubercles, or wart-like protuberances which make up the surface of the plant (Latin *mammilla*, a nipple). These grow in spiral rows about the body of the plant. The spines, borne on the tips of the tubercles, generally grow in intricate and delicate patterns. (*Neomammillaria* Br. and R.)

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More hot weather predicted
Mercury reaches record high level
No relief from heat seen
Heat wave death toll reaches 12
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From \$2 with from . . . \$1 25
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HERE AND THERE . . . on the Desert

ARIZONA

Yuma . . .

"This is Hell." Lynn Jude, 49, prospector, scrawled these three words in the desert sand before he died of hunger and thirst in the barren Gila mountains 16 miles southeast of Yuma. A searching party in May found Jude's body, nearby an empty canteen, and the message. The prospector's automobile, tires flat, stood a short distance away.

Window Rock . . .

Piñon nut harvest in Arizona and New Mexico, in good years worth \$1,000,000, will be poor this year, according to reports here. Because the piñon is important source of cash for the Navajo, the Indian income is hit hard when the crop fails. Annual expedition of the Indians to the hills to gather the nuts is a big event every fall before snow flies in the high country.

Pearce . . .

Basal part of a huge mammoth's tusk was found on the eastern slope of Dragoon mountains in the Sulphur springs valley. Finder was rancher Jack Busenbark. Identification was made by Dr. Emil Haury, head of Arizona university anthropology department. Haury expects to search in the locality for more remains, hopes to find there also evidence of human life during the remote age in which the mammoth lived.

Tucson . . .

By a margin of one point Lee Echols of Nogales won the Arizona state pistol championship. He defeated Norman Adair of Yuma, set a new state record when he scored 297 out of a possible 300 in the centerfire police match.

Prescott . . .

Preparing for the Smoki program August 4, residents of this vicinity are rounding up bullsnakes. Snake hunters responded to an appeal from members of the Smoki clan, who offer a cash bonus for the largest bullsnake delivered to the organization. The Smoki are community leaders who turn once every year from their usual pursuits to present a ceremonial patterned after the ancient Indian snake dances.

Phoenix . . .

Sale of six cattle ranches including 102,000 acres north of Phoenix for approximately \$175,000 is reported. Buyer is Frank N. Bard, Chicago manufacturer, who will consolidate the properties into one ranch, add several thousand head of cattle to those he bought with the land.

Yuma . . .

Bids were opened June 13 for construction of a power plant on the Gila irrigation project east of this city. Water from the Colorado river will be pumped to mesa lands of the Gila valley. First unit of a desert area is expected to be irrigated in 1941.

Camp Verde . . .

Workmen building a new road from here to Montezuma Castle discovered a sealed Indian cave 100 feet long. Several ollas were found and one ear of corn measuring 9½ inches in length. Thorough exploration will be made in search of other relics.

Grand Canyon . . .

From a light canvas boat Barry Goldwater of Phoenix in May gave a realistic broadcast by shortwave radio as his frail craft shot through seven and eight-foot waves of the Colorado river near Phantom ranch at the bottom of Arizona's Grand Canyon. His broadcast was interrupted by circumstances beyond his control when he was forced to quit talking and bail for his life. It was a Ripley program. Robert L. described the gorge as capable of swallowing 100 Yosemites, a dozen Niagars and the entire range of Swiss Alps, with room remaining to toss in all the armies of the world with their full equipment. Governor Jones went on the air to say the canyon is "greatest believe-it-or-not wonder of all time."

CALIFORNIA

Twenty-nine Palms . . .

Appropriation of \$14,000 for the Joshua Tree national monument will be used in part for road work and employment of a custodian, according to a letter from Congressman Harry R. Sheppard, who says "This, I feel, is the beginning of development within the park area that will reflect beneficially in behalf of the citizens of Twenty-nine Palms and residents in that area in general."

Palm Springs . . .

Lloyd Mason Smith of Ontario, California, has been appointed director of the Palm Springs desert museum for the next season. During the past three summers Smith has been doing field work with Dr. Edmund C. Jaeger of Riverside, author of recently published "Desert Wild Flowers."

Palm Springs . . .

Members of the tribal committee of Agua Caliente Indians have asked for federal funds to repair fire-damaged Palm canyon. In a letter to John Collier, commissioner of Indian affairs, the committee says several hundred of the beautiful and valuable palms in the canyon were destroyed or injured. Necessary work should be done at once, the Indians urge.

El Centro . . .

Earthquakes in May caused damage in Imperial Valley estimated at \$2,500,000. Brawley was hardest hit, El Centro, Holtville and Calexico not so severely. South of the border, in Mexico, earth movement disrupted the canal system which delivers water to the rich agricultural district north of the line. Emergency crews worked night and day to restore irrigation service in time to prevent serious crop losses.

Blythe . . .

For flood control work on the Colorado river between Boulder dam and Yuma, the house of representatives has voted \$100,000. Appropriations for the Parker dam project were raised to \$3,500,000 by the Senate and the house concurred. This money will be used to build and equip a hydroelectric power plant at Parker.

NEVADA

Reno . . .

One hundred forty five California couples came to Reno on June 1 to get marriage licenses. All records were broken by the rush of June brides-to-be. Six licenses were issued to "non-Californios" on the first day of the month in which the wedding season is supposed to reach its peak.

Boulder City . . .

Boulder dam, "the west's number one tourist attraction," drew 282,721 persons during the period October 1-May 1. This is an increase of 25 percent over the record for the corresponding period of the preceding "travel year," says a report by Guy D. Edwards, supervisor of the Boulder dam recreational area. August 1939 is high month, with 101,173 visitors. Last year's total was 617,146. If present trend holds until October, it is predicted three quarters of a million persons will be counted in the area during the 12 months ending then.

Reno . . .

Site has been provided, funds are being raised to build a home for the Nevada state historical society. Collections of relics from every part of the state will be housed in the new structure, to be erected this summer, according to Dr. J. E. Weir, secretary. Exhibits range from a mummified Indian baby to one of Mark Twain's pipes.

Las Vegas . . .

Seventy thousand acres and 6,000 head of cattle on the William Dunphy ranch in three Nevada counties have been bought by an eastern capitalist for \$400,000, real estate agents announce. Name of the buyer was not disclosed. The property was owned by the Wilmec corporation. William Dunphy, who established the ranch, died in 1932. He owned at one time 160,000 acres in Nevada and other western states.

Carson City . . .

This is the nation's smallest capital. Its residents point with pride to figures of the 1940 census. In 1930, the city's population was 1596. New tally shows 2474, an increase of about 55 percent.

Goldfield . . .

Less than 40 years ago this world famous mining camp was a city of 30,000 gold-seekers. Now it has a population of 531—or 101 less than in 1930. The figures are released in the preliminary 1940 census report.

NEW MEXICO

Gallup . . .

M. L. Woodard of Gallup, New Mexico, was elected president of the Canada-to-Mexico highway association, in convention here. Next meeting will be held in Grand Junction, Colorado. The association is pledged to work "ceaselessly for the ultimate designation" of the route as U. S. Highway 87.

Albuquerque . . .

Twenty thousand people lined the streets as Albuquerque on May 29 officially opened the Coronado cuarto centennial celebration. More than 1000 paraded in costumes of the Spanish conquistadores, the charro, the frontiersmen and the Indians. Line of march was 22 blocks long. At Bernalillo, where Coronado and his soldiers wintered in the years 1540-42, the Coronado national museum was dedicated. Chief speaker was

Juan F. Cardenas, Spanish ambassador to the United States. In the New Mexico university stadium 800 actors presented "The Entrada of Coronado," a pageant of the conquistadores' great quest of the mythical cities of gold. The "Entrada" will be presented in 18 other towns of New Mexico, west Texas and Colorado during the observance of the cuarto centennial this summer. Taking part in the official program are governors of pueblo tribes, decked in turquoise and silver; the Spanish ambassador; the governor of New Mexico, and representatives of the United States government.

Santa Fe . . .

Santa Fe's 91-year-old afternoon newspaper, the New Mexican, has been bought by Frank C. Rand, jr., president of the Examiner publishing company, owner of the morning paper here. C. B. Floyd remains as business manager of the New Mexican.

Tucumcari . . .

Ranchers of west Texas and eastern New Mexico want to build a defense program against cattle rustlers. Since the first of the year wide spread cattle thefts have been reported. Two men were held in Clovis recently as alleged ringleaders of a group responsible for moving out hundreds of head of cattle. Conferences between sheriffs, state police, ranchers and state cattlemen's association officers are proposed.

Albuquerque . . .

Indian lamb crops set a 5-year record, says a report from H. C. Stewart, of the federal soil conservation service. Acoma, Laguna, Zia and Jemez pueblo tribesmen turned in figures showing remarkable yields. One flock of 507 ewes brought 528 lambs, another flock of 450 had a 98 per cent crop.

Santa Rosa . . .

Largely due to construction of highway 66, a paved coast-to-coast highway through that area, Santa Rosa more than doubled its population in the past 10 years. New census reports 2303 residents, as against 1127 for 1930. Alamogordo, Tularosa, Carrizozo and Capitan, all made population gains.

UTAH

Moab . . .

Motion picture producers are invading remote desert areas for locations. Scenes for "Kit Carson" will be filmed in the northern end of Monument valley, in the vicinity of Harry Goulding's trading post, one of the most out of the way spots in all the wide-open spaces of the west.

Provo . . .

Erection of hundreds of new buildings and homes, new industries and government projects have brought prosperity to Utah valley. Notable among new recreation spots is the Utah lake harbor project, conveniently accessible to nearly 80 percent of the state's population. Important new industries include plant of the Illinois powder company, in the mouth of Spanish Fork canyon. Deer Creek dam and Provo river will stimulate farming in the valley.

Logan . . .

Federal apiculturists are working with state experiment station officials in study of bee losses in Utah, during the present summer. Survey of loco weed areas in the state is also under way.

Salt Lake City . . .

Utah's share of the 1941 national wheat allotment of 62,000,000 acres is 235,469 acres, under the program announced by Henry A. Wallace, secretary of agriculture.



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TELLS STORY OF THE FAMOUS CAMEL EPISODE

The story of the camel in the Southwest is as shadowy and mythical to most people as legends of lost ships and gold mines. That the camel episode was a real one is attested by government and other reports of the 1850s. The journals of two members of the Camel Brigade were edited by Lewis Burt Lesley, associate professor of history at San Diego state college, and published in 1929 by Harvard university press as UNCLE SAM'S CAMELS.

As early as 1836 army officials had suggested the use of camels in opening up the desert sections of the West. A congressional appropriation of \$30,000 was made in 1855 for the purchase and importation of camels for military purposes. Lt. Edward Fitzgerald Beale, then superintendent of Indian affairs in California and Nevada was given charge of the Wagon Route Expedition which left San Antonio, Texas for Fort Defiance, Arizona on June 25, 1857.

The journal of 19-year-old May Humphreys Stacey ends with the crossing of the Colorado river in October. The log making up the second part of the book is Beale's report to the war department. It was officially a survey of the wagon road from Fort Defiance to the Colorado river, although it describes the route from the starting point at San Antonio to the Colorado river and the return to Zuni in February 1858.

Beale's trip had proved the efficiency of the camel to the satisfaction of the secretary of war but his recommendation that congress authorize purchase of one thousand camels was to no avail. Civil War was too close for the experiment to be continued.

The dispersal of the camel train began after 1860. Some of the animals had been left at Beale's Tejon ranch near Bakersfield, others at Camp Verde, Texas. From those points they were scattered in many directions. Most of them were sold at auction, some to zoos and circuses, others to short lived commercial enterprises. A number of them escaped to the desert where they were hunted by Indians or finally died. Some were captured by the Union army in Texas.

In 1864 the group from Tejon was sold at auction, most of them being taken to the Samuel McLeneghan ranch in Sonoma county, later being exhibited and used in packing freight from Sacramento to the Nevada territory. Map, bibliography, index, 298 pages. \$4.00.

NEW ARIZONA GUIDE BOOK ISSUED BY FEDERAL WRITERS

Land of extremes. Land of contrasts. Land of surprises. Land of contradictions. A land that is never to be fully understood but always to be loved by sons and daughters sprung from such a diversity of origins, animated by such a diversity of motives and ideals, that generations must pass before they can ever fully understand each other. That is Arizona.

This opening paragraph presages both the spirit and multitudinous facts to be found in ARIZONA, A GUIDE TO THE SUNSET STATE. It is a product of the Federal Writers project under the direction of Ross Santee, widely known writer and artist. Sponsored by Arizona State Teachers college at Flagstaff and published by Hastings House, New York, in the spring of 1940.

The 530-page volume is in four sections. Part one gives both the Arizonan and visitor a rich background for an appreciation of the state. Among the 16 chapters are such titles as Contemporary Scene, Natural Setting, Indians, Archaeology, Sunburnt West of Yesterday, Agriculture and Industry, Indian Arts and Crafts, Folklore and Folkways.

Eleven leading cities are treated in detail in the second part. Transportation, accommodations and recreation are included in the statistical information. Description and history of the towns, points of interest in and near them, with maps, familiarize the reader with Bisbee, Douglas, Flagstaff, Globe, Miami, Nogales, Phoenix, Prescott, Tombstone, Tucson, and Yuma.

Nearly every town and flagstop is included in at least one of the 13 tours which make up the third part of the guide. The entire state is covered in the Tours section, an outstanding feature of the federal guide series. Mileages, road conditions, various fees and other details helpful to a tourist supplement the history, description and discussion of the inhabitants and the means of their livelihood. A separate section with map covers the Grand Canyon in nine tours.

A chronological history of Arizona, classified bibliography, additional maps and index comprise the fourth section.

The illustration deserves special mention. There are 64 pages of halftone reproductions, as well as sketches. Thomas J. Tormey, president of the sponsoring college, wrote the foreword. \$2.50.

Gems and Minerals

This department of the Desert Magazine is reserved as a clearing house for gem and mineral collectors and their societies. Members of the "rock-hound" fraternity are invited to send in news of their field trips, exhibits, rare finds, or other information which will be of interest to other collectors.

ARTHUR L. EATON, Editor

Cogitations . . .

Of a Rockhound

• Maybe its a good thing that Rockhounds has single track minds and is mainly interested in rocks. Think how inconvenient it would be to track down all the unusual botanical discoveries, newly excavated Indian artifacts, cause a archaeologist cant rest till he sees all new pots everywher. As it is, Rockhounds is kept busy n' outta mischief jus runnin aroun lookin at what the other fella has recently cut, an showin his own.

• Maybe rockhounds is rockhounds becuz they likes rocks, an maybe they's rockhounds becuz they like folks. It's hard to tell which gives more satisfaction, findin good specimens r assoiatin with congenial friends.

• Rockhounds, when they's bein rockhounds an not college perfessors, er carpenters, er congressmen, which they ordinarily has to be, is just about the luckiest folks what ther is—anywher. Practically everybody has a round-faced boss which says when he has to do things like workin er gettin outta bed. It's the clock. But not rockhounds when performin the p'rrogatives of a rockhound. They's their own boss. They can eat when hungry, sleep when they wants to, an work at their own pleasure. Most likely they forgets to wind their watch, an the clock in the automobile is outta commission on account of how ther was so many bumps an warshes in the road to the gem-huntin groun. It dont make no matter though. Rockhounds aint slaves to nobody's clock.

Misnamed Minerals

"Moonstone"

Moonstone is a beautiful, crystalline form of albite feldspar, from Virginia, U. S. A., Ontario, Canada, or Ceylon. It is a translucent, opalescent stone with a greasy luster and a brilliant blue color, which seems to appear mysteriously in only the surface of the stone, as one holds it to the light. As a feldspar its hardness is six.

The so called "moonstones" of the Pacific coast are mostly quartz or chalcedony beach pebbles, which bear a faint resemblance to the true stone. Both quartz and chalcedony are of hardness seven according to Mohs' scale. Most substitutes for the moonstone also lack the brilliant surface blue of the true gem.

NEW MEXICO MINERAL SOCIETIES ORGANIZED

Mineral collectors from all sections of New Mexico met May 19, at the museum in Roswell, and organized the New Mexico Mineral society. The society will be incorporated under the laws of New Mexico as a non-profit group. A resolution was passed to encourage the formation of local societies, to be affiliated with the parent organization.

Officers elected were: Fred A. Miles of Roswell, president; Dr. R. E. Anderson of Lovington, vice president; Dr. R. M. Burnett of Carlsbad, secretary-treasurer.

At the first meeting of the New Mexico society, the president displayed two large cases of Indian relics and choice mineral specimens. In addition, Dr. Anderson gave a comprehensive talk and demonstration on fluorescence. New Mexico, writes Dr. Anderson, offers the mineral collector a greater number of choice mineral and fluorescent specimens than any other locality in the world. New specimens and localities are being reported every few days.

AMAZONITE

Amazonite or Amazonstone is a beautiful, green variety of the little known feldspar, microcline. Amazonite forms hexagonal crystals with very low pyramids, easily distinguished from ordinary feldspar by their bright green color. Beryl forms a crystal of the same shape and similar color, but its hardness of eight is distinctive. All feldspars are six. Gem Amazonite is found in Madagascar, Amelia Court House, Virginia, California and many other localities.

QUARTZ ROSES

Quartz "roses" have been observed in several localities recently. They are of two distinct varieties. The simpler form is a white or pink chalcedony rose, with a colored center, the entire formation then covered with drusy quartz. The other form is made entirely of quartz crystals usually inside of a chalcedony geode. The small mass of crystals seems to be fastened at only one point. When the mass is removed from the geode, and turned over, the point of attachment forms the center of the rose. The numerous petals are slender crystals, all radiating from the center.

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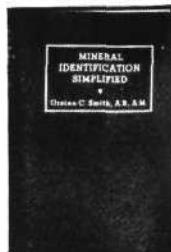
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AMONG THE ROCK HUNTERS

Despite hot weather and earthquakes, Imperial Valley Gem and Mineral society voted to continue its semi-monthly meetings during the summer. Many members are exhibiting exceptionally beautiful geodes and "thunder eggs," obtained on recent field trips.

Dale Lambert, secretary of Columbian Geological society, of Spokane, Washington, reports an overnight field trip to Vantage Ferry, May 18 and 19. Members of the Spokane society camped Saturday night at the east end of Vantage ferry bridge, where they were joined next morning by representatives of Seattle Gem club. The group then traveled about 10 miles south and east to the Saddle mountains. Many excellent specimens of petrified wood were obtained and also some Indian arrowheads and artifacts. The Spokane group was under the leadership of Mrs. Bruce Neal; C. E. and Mrs. McDonald directed the Seattle contingent.

Los Angeles Mineralogical society heard an interesting report on the Almandite garnet deposit on the Tejon ranch, where the garnets occur in diorite. Methods of identifying minerals were demonstrated. Field identification may be made by color, luster, streak, hardness, etc. For further identification the blowpipe, polariscope, microscope, chemical analysis or tests for specific gravity may be employed. On the field trip to Shadow mountain tungsten mine in the Mojave desert, fluorescent lamps were used to locate the mineral.

Kern County Mineral society reports an instructive talk by Jess Stockton of Kern county union high school on the history and development of tungsten mining in Kern county. The society is considering incorporation.

Washington State chamber of mines has purchased, through cooperation of one of its members, Jim Arnaud, a trailer which is available for use by members. It has a patent hitch that allows it to be attached directly to the bumper of any car, and is designed for loads up to half a ton.

Washington State has a new shallow water gold dredge which will work the gravels of the Lower Swauk, from the vicinity of the old Ellensburg-Blewett highway corner up to the tailings of former dredging operations in the Swauk. Dredging will be facilitated by dragline and bulldozer equipment.

Ferry mine on Redtop mountain, northern Stevens county, Washington, announces the strike of five feet of solid Galena. The ore runs between \$60 and \$100 a ton.

Washington state chamber of mines has received so many interesting and beautiful mineral specimens that the collection has outgrown the cabinet space, and additional showcases are needed.

Joseph D'Agostino, secretary of the Plainfield, New Jersey society, states that the name Calamine — $H_2Zn_2SiO_5$ (English) is no longer used, and that the correct term is Memimorphite.

Boston Mineral club has elected the following officers: Dr. Cornelius S. Hurlbut, president; Henry G. Savage, vice president; Dr. John W. Estabrooks, treasurer; Mrs. Grace G. Dearborn, secretary. The Boston club draws its membership from about 50 outlying towns as well as from Boston. The April speaker was Roscoe J. Whitney, who selected the topic "Where Mineral Collecting Has Taken Me."

Tad Johnson, Frank Livesley and Travis Edgar, turquoise miners of Tonopah, Nevada, recently sold nearly five thousand dollars worth of polished stones in Santa Fe and Gallup, New Mexico. After closing the turquoise deal, they purchased a load of Navajo rugs for the California and Nevada markets. The Nevada turquoise is of superior color and hardness.

Cobble Crest ranch, Niles Cañon, was visited May 19th by East Bay Mineral society of Oakland for a picnic and mineral auction.

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C. Leslye Mills of Castlewood school presented kodachrome slides of Death Valley, Bryce Cañon and Zion national parks before East Bay Mineral society May 2. The program for May 16 was a continuation of some physiographic features in California and their geologic explanation by Alfred L. Ransome. The subject covered Sierra province of the state of California, an exposition of mountain building, ore deposits, glaciation, stream action and faulting.

Dora Andersen, secretary of the Sequoia club, is compiling the history of the Sequoia Mineral society.

Sequoia Mineral society enjoyed an overnight field trip to King's Run Cañon in May. The group concludes its year in June with a potluck dinner.

Plainfield Mineralogical society, Plainfield, New Jersey, has inaugurated an "exchange night" for members. No selling of specimens is allowed, only trading. The first field trip of the 1940 season was undertaken May 18th to the Portland and Hadden Neck quarries.

Imperial Valley Gem and Mineral society is making plans for a permanent collection of Imperial valley specimens, to be housed in a large glass case in the Imperial county court house, El Centro, California.

O. C. Smith, president of the Los Angeles Mineralogical society, demonstrated his system of identifying minerals before the Long Beach Mineralogical society at its regular June meeting.

Long Beach Mineralogical society explored the Elizabeth lake region on its June field trip. This section is interesting because of evidence of the active San Andreas fault in the area. It is also a district for gold panning and graphite mining. Specimens were obtained of green basalt and marble, pink orthoclase, albite, graphic granite, apple green talc, and good quality white quartz.

Long Beach Mineral news for May carries an informative article on orthoclase feldspar and related minerals.

James G. Manchester addressed the Plainfield, N. J. Mineralogical society June 4, on chalcedony pseudomorphs of Florida.

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Long Beach Mineral society studied the geological history of Arizona at its May meeting, using Union Oil company's talking, colored movie of Grand Canyon and Bisbee minerals. Al Huffman showed the members how to use the dry washer and other methods of panning.

Dr. Warren F. Fox of Imperial Valley Gem and Mineral society was so inspired by the convention at Santa Barbara, that he issued one hundred copies of a one man bulletin titled "Imperial Valley Mineralogist, Vol. 1, No. 1." The members appreciated his brain-storm.

Juab county, Utah, claims to have the most expensive road bed in the world, paved with topaz! Wendell Paulsen, regional director of W. P. A. at Cedar City, recently guided Frank Beckwith on a trip to Topaz mountain. Along the highway, they actually picked up small but perfect topaz crystals without straying away from their automobile. In the east wash of Topaz mountain they secured some excellent crystals of red topaz from the native rock.

Louise Eaton claims credit for the most unusual crystal of the month. It is small, less than one half inch in length, and hollow. It may have been a phantom crystal in the remote past, but the pyramid was broken off taking with it the core crystal and leaving a six sided cavity. The cavity shows signs of wear, but its original shape is still plainly visible. The crystal is part of a rather imperfect mass of small crystals.

Ed Foerster of Montrose, California, writes that mineral collecting as a hobby is stepping right into the foremost ranks. At the festival of Cultural Arts, April 28 to May 2, in the Glendale civic auditorium, first prize in the hobbies division was awarded to Leslie Foote and Jack Canning for their attractive mineral exhibit. Their display was in competition, not only with other mineral exhibits, but also with exhibits of various other hobbies.

Millard Humphrey of Holbrook, Arizona, has acquired a diamond shaped piece of polished petrified wood, grey in color, which shows a striking likeness of Haile Selassie, deposed emperor of Ethiopia, in black. Scener "pictures" and even animal and bird likenesses are not uncommon in petrified wood and agate, but resemblances to human faces are rare. Robert Ripley has sketched this "Selassie" stone for his "Believe it or not" newspaper cartoon.

Marquette Geologists association of Chicago lost two of its active charter members in June. Esther E. Leggee moved to Claremont, California, to accept a secretarial position. Geneva B. Dow, program and publicity chairman of the Marquette group, transferred her metalcraft jewelry and stone polishing business to the Claremont region. Illinois' loss is California's gain.

Santa Monica Gemological society was organized May 2. The group meets first Thursdays in Ocean Park public library, study group at 7 p. m., regular meeting at 8. Officers are E. F. Montgomery, president; C. D. Heaton, first vice-president; Clifford Schrader, second vice-president; C. H. Chitenden, treasurer; Mrs. Doris B. Baur, secretary.

Lyle Burdette offered the members specimens of star quartz for cutting and polishing. Field trips are being planned and any person in the Santa Monica district interested in becoming a "rock hound" is cordially invited to attend the meetings.

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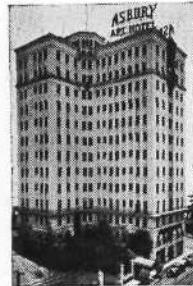


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LOS ANGELES CALIFORNIA

Desert Place Names

Magazine is indebted to the research work done by the late Will C. Barnes, author of "Arizona Place Names;" to Betty Toulouse of New Mexico, to Margaret Hussmann of Nevada and Hugh F. O'Neil of Utah.

ARIZONA

ARIZONA

"This name is taken from an Indian pueblo at the 'little spring' from 'Ari' (small) and 'son' (spring or fountain)" according to Taylor, but it's "an Aztec word, Arizuma, signifying 'silver bearing,'" Sylvester Mowry wrote. "Meaning arid zone or desert," according to Gannett. McFarland explains in the following: "At a point 85 miles southwest of Tucson is a place in Sonora called Banera, some 8 miles west of Sasabe. Three hundred years ago many Indians called it 'Alech-zone,' meaning young spring." Farish says in 1854 New Mexico memorialized congress for the creation of the territory of Arizona. These names were suggested: Pimeria, Gadsonia and Arizona. The last was adopted as most euphonious. This bill died, but was reintroduced in congress in 1859. Reported out in December, 1860, as an "Act to organize the territory of Augu-mo" (sic). No reason given for change in name. According to McClintock, "There is no doubt that Arizona was named after some springs near Banera south of the border and about 85 miles from Tucson. These springs are called 'Alech-zon' by the Papago, meaning small spring. They also apply the name to a small nearby mountain and a ranch." Will Barnes writes that this origin is now accepted by all modern historians. The word Arizona, he adds, seems to have been first used in printed or written form by Padre Ortega, prior to 1754. He speaks of the "Real of Arizona," meaning the country or province of that name. Lieut. Hardy of the English navy used the word in a book he published in 1827. He mentioned the "Arizona Mine." Bancroft declares "Anza used this name as early as 1774 when he referred to a 'Mission of Arizona.'"

For the historical data contained in this department the Desert

CALIFORNIA

SLEEPER'S BEND Imperial county Point on the Colorado river above Yuma, named by Lieutenant Ives on his exploring trip to head of navigation on the river in 1858. Ives reported: "While turning a bend, we suddenly noticed upon the summit of a little hill on the left bank a ludicrous resemblance to a sleeping figure. The outlines and proportions were startlingly faithful." He sketched the hilltop outline and made it a part of the official record presented in 1860 to the war department at Washington.

NEW MEXICO

ISLETA (ees láy ta) Bernalillo county Sp. "islet," an Indian pueblo named from location of the former village nearby on a delta or island between a mountain torrent and the Rio Grande. Native name is Shie-whi-bah, "knife laid on the ground to play whib." Whib is a native footrace. The name was suggested perhaps by the knife-shape of the lava ridge on which the pueblo was built. Date of settlement is unknown to historians. It was a flourishing village when Coronado, first Spaniard to visit New Mexico, saw it in 1540. It was made the seat of the Franciscan mission of San Antonio de Isleta before 1629, and about 1675 received accessions from the pueblos of Quarai, Tajique and others abandoned because of Apache depredations. In 1860 during the pueblo revolt against Spanish intruders, Isleta took no part in hostilities and therefore became a refuge for missionaries and Spanish settlers. However, it was soon afterwards abandoned, some of its people going to a site near El Paso and setting up a pueblo they called Isleta del Sur (Isleta of the south), others going to the Hopi Indians. Bancroft says the northern pueblo was re-established in 1709, but Bandelier asserts it was not reoccupied until 1718.

NEVADA

MESQUITE Clark county Named because a heavy growth of mesquite abounds in the district. Settlement on the Rio Virgin, near Bunkerville, first established in 1883. Many settlers became discouraged and moved away, the place being temporarily abandoned in 1891 when expense of keeping irrigation canals open became heavier than remaining inhabitants could stand. Place resettled in 1895, is now a thriving little community.

UTAH

ANTIMONY

Alt. 6250; pop. 288. Named for nearby deposit of antimony ore. Formerly called Coyote because of large number of coyotes in this region.

AURORA

Sevier county Alt. 5190; pop. 566. Settled 1875 and named for the Roman goddess of Dawn, because of tinted hills surrounding the valley.

Mines and Mining . . .

Engineers club of Los Angeles has joined several other organizations in indorsement of proposal to reopen east half of Joshua tree national monument in Riverside and San Bernardino counties, California, for mineral entry. Congressman Sheppard was asked to sponsor a bill eliminating five easterly ranges of mountains from the monument, lopping off about 450,000 acres from the reservation and leaving approximately 400,000 acres in the protected area.

Lovelock, Nevada . . .

Three California women direct the destinies of the Antimony King mine in the Humboldt mountain range near here. Ore from the property has been shipped to Texas. Officers of the operating company: Miss Alma Dorothy Priester of San Francisco, president; Rose M. Gilbert of Los Angeles, vice president, and Charlotte B. Wells of San Francisco, secretary-treasurer.

Reno, Nevada . . .

Third upswing in Nevada gold production may reach a peak of \$15,000,000 in 1940, according to reports to the Mackay school of mines. Banner year was 1878 when yellow metal output in the state was worth nearly \$20,000,000. Between 1890 and 1895 production fell to a low of \$1,000,000 annually, soared again in 1910 to nearly \$19,000,000. This second upsurge was credited to activity at Goldfield, Bullfrog, Manhattan and Round mountain. Between 1920 and 1930 production declined to about \$5,000,000 a year. Current gold price is responsible for a 1939 record of \$11,865,000, with expanding operations this year.

Pioche, Nevada . . .

In June the old Comet district, formerly noted for silver and lead output, was invaded by claim hunters following reported discovery of rich gold ore near Ely springs. In shale and quartz Irvin Bauer is said to have made a strike with values ranging from \$25. to \$2500 per ton. Newspaper reports say Bauer made his find while hunting deer last fall. The news didn't leak until several claims had been staked and location work completed.

Prescott, Arizona . . .

Along five miles of the upper Hassayampa river south of here large scale placer operations have been started by Lord & Bishop construction company of Sacramento. Equipment includes a two-yard dragline, floating treatment plant and diesel electric power. Several placer properties have been taken by the Sacramento concern by purchase or lease, among them the Blount & Scott and Hobbs groups of claims.

Payson, Arizona . . .

At Pine mountain cinnabar mine in the Sunflower district south of here a complete mercury recovery plant is being installed. Diesel electric power will be used, with a rotary furnace of 35 to 50-ton daily capacity. Installation is directed by John W. Judy. Owners are H. A. and H. J. Stromsen of San Pedro, California.

El Centro, California . . .

Production of manganese ore from the El Chico district of Baja California, 40 miles south of El Boleo will be stepped up to 1000 tons a month, it is reported here. The ore is blasted from trenches, barges are used to haul the high-grade across the Gulf of California to Guaymas and from that port shipment is made by rail to Pittsburgh steel mills. Recent output ranged from 500 to 600 tons monthly, the ore averaging 60 percent manganese.

Wickenburg, Arizona . . .

Installation of additional equipment will double capacity of the 100-ton mill of the East Vulture mining company at the old Vulture, where low grade ore is being profitably handled. In the 60s and 70s operators took more than \$6,000,000 in gold and silver from the mine.

Ogden, Utah . . .

Utah legislature is urged to provide better facilities for relief of miners suffering from silicosis. Resolution adopted by the Tintic miners union requests funds for hospital facilities in connection with the state tuberculosis sanatorium at Ogden, where disabled and silicotic miners could be cared for. Federal government has set aside 50,000 acres of public domain for a miners' hospital in Utah.

Desert Center, California . . .

With more or less reserve the mining fraternity receives another report that the famed Peg-Leg Smith gold mine has been found again. This time prospector Jackson Hill claims he has located the mythical bonanza in the Chuckawallas 14 miles southwest of here. Hill is quoted as saying a map given to him 36 years ago in Alaska led him to Peg-Leg's mine. There are thousands of tons in rich ore in a vein five feet wide and 5000 feet long, according to this report, and the ore assays "\$1000 a ton and up," it is claimed.

Socorro, New Mexico . . .

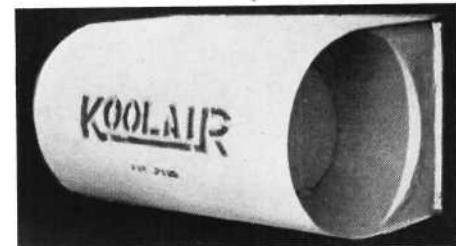
First girl graduate of the New Mexico school of mines is Irene Ryan. She was one of 21 seniors who received their degrees in commencement exercises marking 51st anniversary of the school.

Ogilby, California . . .

Sixty-five men were laid off when Kenneth Holmes in May closed the Cargo Mucachao mine for the summer. The Holmes mill at Arax was shut down at the same time, first time the mine and mill have been closed in two years.

Quartzsite, Arizona . . .

Seven thousand acres of dry placer ground seven miles south of here have been taken over by the United States Smelting Refining and Mining company of Salt Lake City and are to be worked on a large scale. The claims are owned by La Posa Development company which has been handling 75 yards daily with a small plant. The Salt Lake concern has been test drilling the property for several weeks.



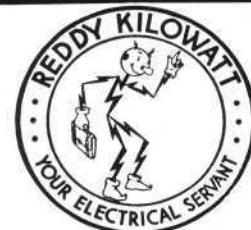
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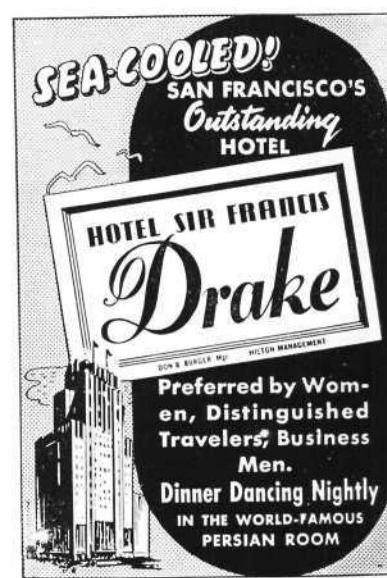
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Just Between You and Me

By RANDALL HENDERSON

MANY readers have written expressing the hope that the Desert Magazine was not seriously damaged by the earthquakes which visited Imperial valley May 18. I appreciate the interest of these loyal friends, and I am glad to assure them our new building and printing plant came through practically unharmed. I was camping on the Vallecitos desert that night, many miles from the Andreas fault, and did not even share in the excitement. As far as I am concerned old Mother Nature's blitzkrieg was a complete dud.

Some of my neighbors were not so fortunate however. But they are rebuilding—more substantially than before. San Francisco, Santa Barbara, Long Beach and other California communities have been through quake disasters—and out of the ruins have created cities more beautiful and more permanent than those which existed before the catastrophe. Imperial valley will do no less.

When we consider the fury of the man-made storm that has been unleashed on continental Europe we must conclude that after all, Nature's upheavals are mild indeed compared with the murderous destruction that man brings on himself and his brother.

* * *

The best yarn this month comes from Gus Eilers of Date Palm beach on the north shore of Salton sea. The rising waters of the sea in recent months have submerged part of Gus' desert domain—and he's been trying to find who's to blame.

Since no one else offered a plausible theory—he concocted one of his own. "That sea is swarming with mullet," he explains. "The last couple of years they have been increasing by the millions. The law prohibits seining, and being vegetarians they won't take an ordinary hook. So they just live there and grow fat."

"Figure it out for yourself. Each fish displaces so many cubic inches of water, and the bigger they grow the more space they take. Multiply that by 100 million—and it is no wonder the sea is spreading out."

"Goofy? Sure! But that idea is no crazier than some of the others that have been suggested."

* * *

Hot? Yes, it is hot in the desert lowlands these days. But what of that? Florida has its hurricanes Kansas its dust storms, the Dakotas their wintry blizzards. Few places on the face of the earth have climatic conditions that are always temperate.

It is fortunate for human beings that this is true. Normal

man needs extremes of physical environment to keep his adaptive functions active. Do not complain about the heat, or the cold or the winds—be thankful we have them. Without them we would grow sluggish and degenerate.

* * *

On a recent trip to Arizona I spent an afternoon at the old Governor's mansion in Prescott visiting with Sharlot Hall. As a girl she rode range on her father's ranch in daytime and wrote poetry by lamplight at night. Later she was an active associate of Charles F. Lummis in editing *The Land of Sunshine* and *Outwest* magazines.

This was my first acquaintance with Miss Hall—and now I know why she is loved and honored by every Arizonan. She is a true daughter of the frontier—who calls a spade a spade, and leaves no doubt as to what kind of a spade it is. But don't misunderstand me. I have never met with more genuine courtesy than I found in the home of Sharlot Hall.

I have a great admiration for Lummis and Miss Hall and the editorial staff of the magazine which more than a half century ago began the pioneering task of popularizing the desert Southwest. It was a tremendous undertaking—and I would be very happy indeed if I could feel that the Desert Magazine measured up to the standard of accuracy and literary excellence attained by its original predecessor in this field.

* * *

I have been reading *I Found No Peace*, autobiography of Webb Miller, United Press correspondent who met a tragic death in London a few weeks ago. As a boy, Miller was shy and unprepossessing. He had none of the attributes of a reporter—except a studious mind. At the time of his death he was recognized as one of the greatest American foreign reporters of this generation.

From early youth and continuing through his life, Miller derived strength and inspiration from the philosopher Thoreau. It is a philosophy that would be good tonic for other Americans of this period. Miller summarized it:

"Thoreau's philosophy I conceived as follows: You make yourself rich by making your wants few; you can insulate yourself from the shocks of life to a certain extent by occasional solitude; human beings have relatively few essential material needs and these few are easily filled; you can be happy if you have the mental resources to feel pleasure and ecstasy in nature and natural things. Such a philosophy comforted me and ought to appeal to millions in these days of economic and political stress."